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DETERMINANTS OF EDUCATIONAL EXPENDITURES IN LARGE CITIES OF THE UNITED STATES.

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THIS REPORT IS A STUDY OF THE PROCESSES BY WHICH MONEY IS ALLOCATED TO THE SUPPORT OF EDUCATIONAL SERVICES IN THE PUBLIC SCHOOLS IN LARGE CITIES OF THE UNITED STATES. IMPLICIT IN THE RATIONALE ARE THE ASSUMPTIONS THAT RESOURCES AVAILABLE FOR THE SUPPORT OF PUBLIC EDUCATION ARE RARELY SUFFICIENT TO SATISFY ALL THE DEMANDS MADE UPON THEM, AND THAT DETERMINATIONS ABOUT THE LEVEL OF PUBLIC SCHOOL FINANCIAL SUPPORT ARE ALMOST ALWAYS MADE IN COMPETITIVE SITUATIONS. THE RATIONALE POSTULATES THREE MAJOR DETERMINANTS OF EDUCATIONAL EXPENDITURES IN THE PUBLIC SPHERE--(1) A SET OF SHARED EXPECTATIONS FOR EDUCATIONAL SERVICES, (2) THE AVAILABILITY OF WEALTH FROM WHICH FUNDS FOR SCHOOLS CAN BE ALLOCATED, AND (3) A POLITICAL SYSTEM THAT ALLOWS THE EXPRESSION OF DEMANDS AND ACCESS TO THE ABILITY. THE SAMPLE FOR THE STUDY COMPRISED 107 OF THE 119 LARGEST SCHOOL DISTRICTS IN THE U.S. IN 1960. THE DISTRIBUTION IN ADA RANGED FROM APPROXIMATELY 20,000 TO 1,000,000 STUDENTS. THE 107 DISTRICTS WERE LOCATED IN 36 STATES. THE LARGEST NUMBER OF DISTRICTS IN ANY ONE STATE WAS 11. IN CALIFORNIA (HEMMED IN BY A GROWING BODY OF STATE REGULATIONS, STATE-MANDATED SERVICES, LEVY LIMITATIONS, SALARY SCHEDULES, AND OTHER STAFF BENEFITS), THE TYPICAL BOARD OF EDUCATION MAY BECOME PARTIALLY IMMOBILIZED, AND THUS ATTEMPT ONLY RELATIVELY MINOR ADJUSTMENTS IN THE SCHOOL BUDGET. THE PROGNOSIS WILL REMAIN PESSIMISTIC UNTIL SOCIAL POLICY FOR EDUCATION IN CITIES IS DETERMINED ON GROUNDS OTHER THAN THE AVAILABILITY OF RESOURCES UNDER TAX STRUCTURE DESIGNED DECADES AGO. (JL)

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DETERMINANTS OF EDUCATIONAL EXPENDITURES IN LARGE CITIES OF THE UNITED STATES

by

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1966

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education

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Cooperative Research Project No. 2389
(An Extension of Cooperative Research Project Nos. 803 and 1241)

H. Thomas James, Director
James A. Kelly, Assistant Director
Walter I. Garms, Assistant Director

The research reported herein was supported by the Cooperative Research Program of the Office of Education, U. S. Department of Health, Education, and Welfare.

PREFACE

This report is the third in a series of studies of the processes by which resources in the United States are allocated to the support of public education. Like the studies that preceded it, this one had two purposes; the first was to refine further the inductively-derived rationale for the study of school finance which has interested the director for the greater part of a decade, and the second was to apply the rationale to school systems in the great cities of the United States.

This report has four major parts. In Chapter I, we examine the historical development of the great cities in this country, focusing on trends in population, taxable wealth, school enrollment, and expenditures per pupil. In Chapter II, we present a rationale for the study of school finance and indicate how the rationale was used in the conduct of this study. The rationale postulates three sets of determinants for educational expenditures: expectations for educational services; financial ability to realize the expectations; and governmental arrangements through which expectations are expressed and abilities utilized. Chapter III reports an examination of the budget processes in 14 large city school districts. Events observed during the budget processes and the relationships between the participants in the budget processes are described fully. Chapter IV reports an empirical analysis of the relationship between expenditures per pupil and measures of the three sets of determinants of educational expenditures in 107 of the largest school districts in the United States in 1960.

For the reader of this report who is actively involved in administration and policy issues in big city school systems, the chapters reporting the historical development of city school systems and the chapter discussing the budget processes in 14 cities may be of most interest. For these readers, the first and third chapters may be read independently of the rest of the report. On the other hand, the researcher in school finance, political science, or economics may wish to concentrate also on Chapters II and IV, which deal with the theoretical structure and statistical analysis.

As in the previous studies, we find ourselves indebted to many people; we are beginning to marvel at the degree to which persons whose contributions were acknowledged in the earlier studies have continued to share our interest and to contribute suggestions, criticisms and insights into the problems under study. The financial support for this, as for the two previous studies, was provided by the Cooperative Research Branch of the United States Office of Education. The valued encouragement and assistance of many members of the Office staff previously acknowledged is reaffirmed here with special emphasis on the assistance provided in the study by Eugene P. McLoone, specialist in finance, who provided comparable school expenditure data from the last decennial study of education conducted by the Office, and who advised us on their interpretation.

A national advisory panel of persons knowledgeable about school finance again was constituted with much of the same personnel as for previous studies; to them the director has turned from time to time for individual counseling on specific problems and for reactions to manuscripts. The following colleagues were especially generous in their contributions: Charles S. Benson, Arvid J. Burke, Jesse Burkhead, Roald F. Campbell, John Guy Fowlkes, Harl E. Ryder, and G. E. Watson.

This study had a rare resource in the Research Council of the Great Cities Program for School Improvement. Without the full cooperation of the member cities in the Research Council, it would have been extremely difficult to carry out this study. We are particularly grateful to the school administrators and board members in each of the 14 cities in which our staff extensively observed the budget processes. The Executive Committee of the Research Council was instrumental in encouraging the director of this study to prepare the proposal on which this report is based. Particularly helpful throughout the study were Benjamin E. Willis, General Superintendent of Schools, Chicago, Illinois; Harold S. Vincent, Superintendent of Schools, Milwaukee, Wisconsin; Samuel M. Brownell, Superintendent of Schools, Detroit, Michigan; and Frederick C. Bertolaet and Carl E. Thornblad, members of the Research Council's staff.

We again remind the reader that while we expect a study of this kind to be evaluated on the substantive contribution it makes to knowledge, we value also its useful by-products--the men it helps to develop through support for advanced graduate study.

James A. Kelly, assistant director of this study, is completing work for the Ph.D. degree and in the fall of 1966 will be assistant professor of education at Teachers College, Columbia University. Walter I. Garms, whose Ph.D. will be completed in 1967, also served as assistant director of the study and is now Administrative Officer of the Center for Research and Development on Teaching at Stanford University. Warren B. Carson completed the doctorate in 1965 and has become Director of School Finance in the state of Oregon. Joseph M. Cronin received his doctorate in 1965 and is now assistant professor of education at the Graduate School of Education, Harvard University. Harl E. Ryder, who provided valuable assistance in designing and evaluating the statistical analyses, is now assistant professor of economics at Brown University. James W. Guthrie, who will complete the Ph.D. in the summer of 1966, has been awarded a Washington Internship in Education to serve as assistant to the Director for Congressional and Legislative Affairs in the Department of Health, Education, and Welfare. Chester Kiser will complete the doctorate in the summer of 1966 and will be associate professor of education at the State University of New York at Buffalo. Conrad H. Potter will complete the doctorate in the spring of 1966 and will become an Area Field Representative of the U. S. Office of Education. H. Gerard Rowe is completing the doctorate in 1966 and is Executive Director of the PACE (Projects to Advance Creativity in Education) Program in San Mateo County, California. David N. Evans, Cornelius F. Butler, Donald M. Spellman, and J. William Worden are embarked on courses of study that will lead to the doctorate in educational administration. John Bane served on the staff for one year and has resumed administrative responsibilities in the Boston public schools.

Finally, I wish to thank Coralie Novotny, who has rendered exceptionally valuable assistance as my secretary and administrative assistant throughout the study, and Naomi Boyce and Willene Peterson, her able assistants, who performed the essential clerical services required by the project. Carolyn Wood provided important editorial and library services during the study, and Linda Brownrigg's editorial assistance was invaluable as this report was being prepared.

After assessing the foregoing contributions, the director alone is responsible for the contents of this report.

H. Thomas James
Director

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CHAPTER I

INTRODUCTION

We report here a study of the processes by which money is allocated to the support of educational services in the public sector in large cities of the United States. The proposal for this study and the rationale that guided it are outlined in Chapter II.

Before turning to these matters, however, we feel the reader may gain greater perspective if we review briefly certain aspects of the growth of our cities and its social consequences, and of the growth of our city school systems. It is obviously difficult to select from the mass of what is known and has been written about urbanism, and from the many impressions gathered by our staff, even those aspects most relevant to our study. Somewhat arbitrarily, then, we shall focus here on the consequences of the growth of our cities and changes in the pattern of growth. As we shall see, one consequence has been the changing character of education in the central core of our cities. This is due to the interaction of many factors, but our analysis indicates the great significance of local taxpaying ability. It is unfortunately true that with respect to public education, the quality in a given area depends on what is demanded and what can be afforded, not on what is needed or ideally desired.

THE CITY

The great city, in terms of population, is a recent phenomenon; few cities of the world exceeded 100,000 before the nineteenth century. In the United States, Philadelphia, the first national capitol, had only 28,522 inhabitants in 1790; it was passed in the census of that year by New York with 33,131. In the 1790 census Boston had 18,038, Baltimore 13,503, and Washington, D.C., only 5,872. But the term "city" itself is imprecise and must be modified to indicate whether it refers to a civil division of government, or to the standard metropolitan statistical area, in which many civil divisions are grouped and given the name of the core city; or whether it refers to places where people are counted in millions, as in six of our cities, or in thousands, as they are in most American cities, or in hundreds, or tens, or ones, as they are in places defined as cities in the statutes of some states.

The 1960 census distinguishes between rural and urban communities by classifying as urban those places that have 2,500 or more persons in an incorporated area, or if unincorporated, those places with 2,500 or more, and with densities above 1,500 persons per square mile. A total of 6,041 urban places was reported. Among these were 130 cities with populations of more than 100,000, in all containing more than 50 million persons, or about 28.5 percent of the total population of the United States. It was from these large cities, and especially from a sample of 14 of the very large cities,[1] that most of the data for this study were drawn.

For the careful student the study of city census data can be rewarding, for it challenges many popular attitudes and myths about the city. For instance, we had become so accustomed to the growth of cities that it came as a surprise to the citizens and even the officials of many of the larger cities to learn that their cities did not grow between 1950 and

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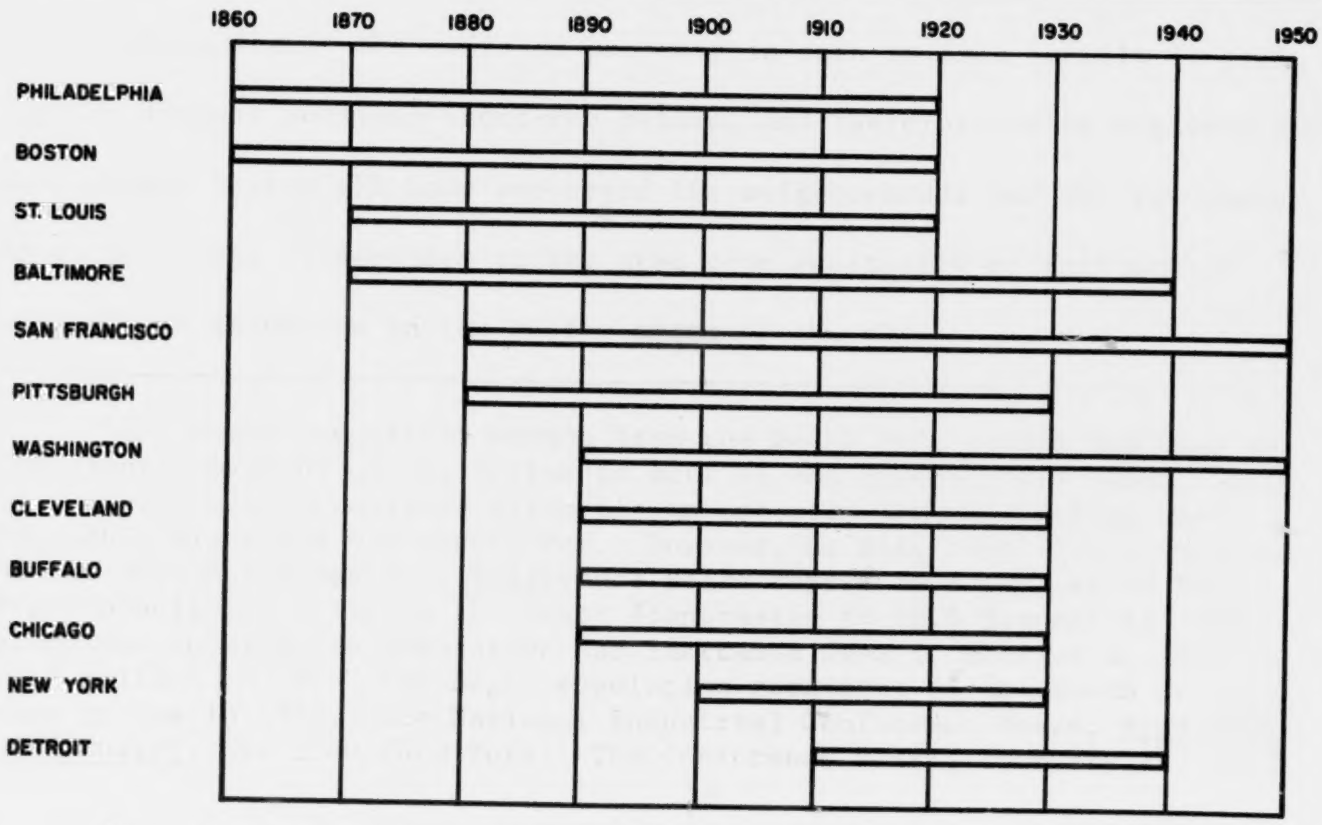
[1] The 14 cities are: Baltimore, Boston, Buffalo, Chicago, Cleveland, Detroit, Houston, Los Angeles, Milwaukee, New York, Philadelphia, Pittsburgh, San Francisco, and St. Louis.

1960; about a third of the cities with populations over 100,000 declined in size, and a general decline was evident in the very largest cities. Of the cities of over a million, only Los Angeles gained population; New York, Chicago, Philadelphia, and Detroit lost a total of about 330,000 people. Similarly among the five next largest, only Houston gained population; Baltimore, Cleveland, Washington, and St. Louis together lost about 185,000 people. Among the remaining 120 cities, however, size did not seem to be related to growth, for the list, when ordered by size, has cities that grew and those that did not distributed fairly regularly throughout.

The great cities were built in a remarkably short period of time. Figure 1 shows the span between census years in which most of the growth took place.

FIGURE 1

GROWTH OF SELECTED GREAT CITIES SHOWING DECADES BETWEEN THE FIRST QUARTILE AND THE 90TH PERCENTILE OF GROWTH TO 1960



Source: U. S. census data, 1860 through 1960.

Two of these cities, Detroit and New York, took little more than a generation to grow from a fourth to approximately 90 percent of their 1960 population; only five took as long as two generations. Most of the growth occurred between 1890 and 1930, and there has been comparatively little construction of either residential housing or schools in these cities since 1930. Consequently, most of the housing, whether for families or for children in school, is old, outmoded, and, unless offset by unusual efforts at maintenance, dilapidated. Those who move out of neighborhoods with housing of this kind are seeking better conditions to live in; those who move in are persons displaced by the decline in agricultural employment possibilities, and to a lesser extent in other resource-related activities.[2] They are seeking the most space they can get for the least possible rent, and they are participants in an historical process by which urban residences, as they deteriorate, filter down through the socio-economic levels of the population until only the rural migrant finds his lot improved by occupying them. The owner of property in such an area usually is seeking the largest possible short-run return, and therefore often neglects the maintenance that might have preserved the neighborhoods and the tax base. Thus, the costs of services to the area come eventually to fall almost entirely on taxpayers in the better parts of the city.

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[2] The Negro population moving from the South into cities has been an important component of the influx to most of the cities under study. We encountered well-formulated arguments in one city school planning unit that this migration was about over. However, we note that 1964 estimates of the National Industrial Conference Board report 54.4 percent of the Negro population still in the South (contrasted to 68.0 percent in 1950); since the total Negro population has increased from 15 million in 1950 to 20.9 million in 1964, the Negro population remaining in the South is larger than it was in 1950. See National Industrial Conference Board, Road Maps of Industry, No. 1540 (New York: The Conference Board, February 15, 1966).

The most depressed areas become the last haven of the very poor in the city, and the price they pay for housing, in relative terms, is appalling;[3] the mothers of dependent children may spend as much as 70 percent of their monthly welfare checks for rent. These properties, which pose a many-faceted threat to the general welfare, in the final stages of decay may be almost entirely subsidized by government. Thus, the more affluent areas pay most of the cost of concentrating the population in such blighted areas, and most of the cost of municipal services to them, because the properties provide below-average per capita valuations for the tax base, and the people who live in them find few ways to be productive. Furthermore, even after the areas have been cleared and replaced by public housing, in-lieu-of-taxes payments by the authority providing the housing may be very modest, so that cost of services to the area continues to weigh heavily on other parts of the city.

As densities build up, the distribution of families is increasingly a function of family income. The very rich can afford the space they want in the city, and so may choose to hold large spaces for sentimental reasons, or for the prestige generally accorded to conspicuous consumption, or simply for convenience. The middle-income groups may move to the suburbs if their families are large, or may stay if the family is small. The poor must stay, regardless of family size, because they lack the capital or the credit to purchase suburban homes, or even to rent them under the special restrictions and requirements typical of suburbs. Thus, as densities increase, the amount of living space per person available to the low-income families declines toward some level not yet clearly defined where even the poor rebel. Somewhere near this level society recently has begun to accept the evidence of rising social costs, and to intervene with slum clearance, housing subsidies, and programs for urban renewal.

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[3] One owner recently quoted in the press referred to her property, rented to mothers of dependent children for two-thirds of their monthly checks, as "my little gold mine," while defending herself from repeated charges of violating housing safety and health ordinances.

It will probably not be possible to establish an absolute minimum for the amount of space required for people to continue to live voluntarily in the city because of the slipperiness of the concept "voluntary." We find some evidence in census data that cities which reach a certain density will decline in population.[4] This relationship seems reasonable on economic grounds. As density increases, so too does the competition for space. Those who value living in the city find they must pay higher prices for living space, or use less space; consequently, those who cannot afford the space they want or cannot tolerate life in the space they can afford, move out from the center of the city until they can find the appropriate balancing point between the declining cost of space and the increasing costs of access to the city. The relationship also seems reasonable on social grounds, for we have many examples of the increased discomforts suffered by the individual as social distances among individuals decrease; and people will sometimes forego economic benefits in order to increase social distances.

Table 1 shows the remarkable differences in the distribution of growth among cities ordered by density. Among cities with densities below 5,000 persons per square mile (fewer than 8 persons per acre), all but five exhibited growth during the last decade (the exceptions were Birmingham, Alabama; Chattanooga and Knoxville, Tennessee; Kansas City, Kansas; and Scranton, Pennsylvania). Two-thirds of the cities with densities of 5,000 to 8,000 persons per square mile (from about 8 to about 12 persons per acre) showed growth. Among cities with densities of 8,000 to 11,000 persons per square mile (from about 12 to about 17 persons per acre), only one-third showed growth; and among cities with densities above 11,000 per square mile (17 persons per acre), only one city in twenty grew.

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[4] We hypothesized that cities of highest density were least likely to grow and that cities of lowest density were most likely to grow. For the 130 largest cities, the Pearson coefficient of correlation between population density and change in population between 1950 and 1960 is -.49. Since an alternative hypothesis, that growth reduces density, is implausible, we infer that about 24 percent of the variance in population growth can be explained by density.

TABLE 1

POPULATION GROWTH AND DENSITY IN CITIES ABOVE 100,000 POPULATION[a]

Population per Square Mile, 1960	Number of Cities	Cities Showing Growth Between 1950-60	
		Number	Percentage
Below 5,000	61	56	92
5,000 to 8,000	38	25	66
8,000 to 11,000	12	4	33
Above 11,000	19	1	5
Total	130	86	66

[a] Chi square 27.2, significant at the .001 level.

Source: U. S. census data, 1950 and 1960.

Much of the increasing densities resulted from the concentration of low-income, large families in neighborhoods formerly occupied by middle-income, small families. In many neighborhoods, comfortable homes and apartments of seven to ten rooms were designed and built early in this century for a family of perhaps five and a servant. In the period since

World War II, many of these have been altered to house three or four families, so the facilities designed to serve the earlier population in spacious comfort now are overflowing. Since schools and playgrounds were also designed to serve the earlier and smaller population, they, too, are overflowing. Table 2 illustrates with data from several of the largest cities how serious this problem is; all of the largest cities that showed a decrease in total population between 1950 and 1960 also showed an increase in school-age populations.

TABLE 2

CHANGES IN TOTAL POPULATION AND SCHOOL-AGE POPULATION IN SELECTED CITIES, 1950-1960

City	Percentage Change in Population, 1950 to 1960	
	Total Population	School-Age Population
New York	- 1%	+20%
Chicago	- 2	+25
Philadelphia	- 3	+ 8
St. Louis	-12	+19
Boston	-13	+ 6
Baltimore	- 1	+27
Cleveland	- 4	+27
Buffalo	- 8	+19
San Francisco	- 5	+25
Pittsburgh	-11	+12
Detroit	-10	+22
Washington, D.C.	- 5	+26
Mean	- 6	+20

Source: U. S. census data, 1950 and 1960.

One of the social costs of crowding low-income groups into the center of the city is to reduce the effectiveness of the schools in the neighborhoods affected. Just as society has recognized the cost of too little living space, so also the equally great although perhaps less dramatic cost of too little education is being attacked. City school policy in many cities in this decade is trying to reverse the historical tendency of the city's political mechanism to distribute all services of government, including educational services, among neighborhoods in response to and in proportion to the expressed demands for services. Reversing this tendency is extraordinarily difficult, because neighborhoods higher in socio-economic status know the value of education, are more sophisticated in judging the quality of the services, and are insistent in the demands they make for the best they can obtain in both quality and quantity. In contrast, the neighborhoods with people lower on the socio-economic scale frequently place less value on education, are less able to judge quality, are less sophisticated in organizing pressure groups, and tend to be less persistent in pressing their demands for services.[5]

Further complicating the efforts of the city school systems to improve education in the poorer neighborhoods is the decline in the ability of most of the cities to support the cost of government services. This may be the most significant factor, for our study has shown that local taxpaying ability is a major influence on educational policy. Cities generally rely heavily on the property tax base for revenue, and the property tax base has not kept pace with the rising costs of all services of government, including education. From 1930 to 1960, the average expenditure per pupil for education in the United States increased by over 300 percent, from $87 per pupil to $375. Table 3 shows estimates of full market value of taxable property per capita in the great cities in 1930 and 1960, together with percentages of increase. The reader is cautioned against making any rigorous comparisons on the basis of these data, because of variations in assessment practices within assessment districts, especially in ratios of assessments to full market value by classes of property.[6] These data are offered to emphasize how dramatically the increase in property value has lagged behind the steadily rising costs of education and other governmental services. Even the largest percentage increase in valuation (Houston's) compares unfavorably with the figure given above for the increase in the average expenditure per pupil.

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[5] It can be argued that current civil rights demands and Negro voting behavior conflict with this generalization, but it remains to be demonstrated how persistent these trends will be as the Negro neighborhoods continue their socio-economic stratification. One can hope that the dreary cycles of the past can be avoided as we spread understanding of the social and economic benefits of education, and as educational improvements are demanded for their intrinsic value, and not as a means to desegregation of neighborhoods.

Assessed valuations per pupil declined the past five years in 11 of 14 cities. However, this ratio increased in 8 of the 11 states in which those cities are located.[7]

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[6] One can do as most reputable commentators on this subject have done in recent years and say that we should ignore the data since they are not very good. However, our preference is to continue to study them, because they probably are getting better, as state tax authorities become increasingly involved in local assessment practices, and they certainly will become better as we strengthen the capabilities of national agencies for surveying market values and relating them on comparable bases to assessed values among cities.

[7] The Challenge of Financing Public Schools in Great Cities, the Research Council of the Great Cities Program for School Improvement, Chicago, Illinois, Table 8.

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TABLE 3

ESTIMATES OF EQUALIZED VALUE OF TAXABLE PROPERTY PER CAPITA IN SELECTED CITIES, 1930 AND 1960[a]

City	Estimates of Full Market Value of Taxable Property		
	1930	1960	Percentage Increase
New York	$ 3,072	$ 3,518	15%
Chicago	2,958	5,018	70
Philadelphia	2,714	2,862	6
St. Louis	2,477	6,611	167
Boston	2,786	3,207	15
Baltimore	3,071	5,907	92
Cleveland	2,782	6,986	151
Buffalo	2,443	3,350	37
San Francisco	4,992	10,826	117
Pittsburgh	2,734	3,418	25
Detroit	2,379	5,990	152
Milwaukee	2,407	4,388	82
Washington, D.C.	3,009	7,883	162
Los Angeles	2,852	7,264	159
Houston	2,281	6,869	201

[a] Derived from assessed valuations as shown in Appendix A by applying ratios of assessed value to full market value and dividing by populations reported by the U. S. Census Bureau; the ratios for 1930 were reported in the National Municipal Review (December 1931), pp. 707-17, and the 1960 ratios were obtained by questionnaire from the districts. The equalized value estimates were used because of variations among cities and over time in assessment ratios; assessment ratios reported for these cities in 1930 varied from 37 to 90 and in 1960 from 23 to 82.

Despite these declines, however, cities still have higher assessed valuations per pupil than other school districts in the same states. In 1960, for instance, the assessed valuation per pupil in the 14-city sample was $19,921; in a sample of 107 large cities, $13,016; for the United States as a whole, $10,953.

The ability of cities to support public education is weakened, however, by two additional factors: the proportion of local government revenues devoted to non-school governments (i.e., municipal or county), and special legislature-imposed restrictions on urban property tax levies. Table 4 reflects the "municipal over-burden" phenomenon by indicating that non-school governments in big cities absorb a greater proportion of property tax revenues than do local governments in smaller cities in the same states.

Another factor weakening the ability of large core cities to support education is the tendency in many states to place more stringent limitations on property tax levies in cities than in other school districts. In 7 of the 14 cities, the state constitution or statutes restrict the access of city school districts to property tax revenues more severely than they do smaller districts in the same states. We will discuss these limitations in greater detail in Chapter III.

TABLE 4

PERCENTAGE OF PROPERTY TAX LEVIED BY NON-SCHOOL GOVERNMENTS

City	City Percentage	Average of Other Local Governments Within the State
Baltimore	67%	Not Available
Boston	73	73%
Buffalo	76	49
Chicago	60	44
Cleveland	58	Not Available
Detroit	57	48
Houston	64	Not Available
Los Angeles	54	49
Milwaukee	66	47
New York	77	49
Philadelphia	58	22
Pittsburgh	61	22
St. Louis	51	Not Available
San Francisco	71	49

Source: The Challenge of Financing Public Schools in Great Cities, the Research Council of the Great Cities Program for School Improvement, Chicago, Illinois, Table 9.

The ability of these cities to provide governmental services has been further reduced by the tendency in most to allow the ratio of assessed values to full market values to decline, thus reducing the exposure of property to taxation. This policy would probably make little difference if rates were free to vary (though there is some evidence that people resist higher rates, even though the actual taxes paid are the same); but most of the cities operate under restrictions on the levy rate, and so reducing assessment ratios reduces the possible yield of the tax base. Table 5 shows the assessment ratios in 1930 and in 1960, and the assessment ratios on housing reported by federal appraisers in 1962. It will be noted that in every city except Chicago the assessment ratio declined between 1930 and 1960.

The sales-based data on residential housing are included to suggest the probability that in the long run the taxpaying ability of cities may be reduced by another practice. This is the generally accepted practice of underassessing residential housing, and overassessing commercial properties, with industrial properties also overassessed in many jurisdictions in relation to residences. This is an extraordinarily difficult phenomenon to study because of the secrecy surrounding assessment practices in a great many jurisdictions. Yet persons who are informed generally concede that the tendency is to underassess residential properties, particularly those which are owner-occupied, and most especially those which have been under one ownership for a long time. This phenomenon is most conspicuous in jurisdictions where assessors are elected, but can often be seen where they are appointed. This is in recognition of the fact that residents control many more votes (and the older residents wield much greater influence) than the corporate bodies who own the commercial and industrial properties. Where the discrepancy between the assessment ratio for all property and for residential property is very large, it almost certainly implies a tax overload on corporate properties. In the long run, one would expect such arrangements to be a factor favoring the decision of industries and commercial ventures to move to other jurisdictions, and a factor weighing against decisions for new industries and commercial units to settle in cities where this is the practice.

TABLE 5

RATIOS OF ASSESSED VALUES TO FULL MARKET VALUES IN SELECTED CITIES, 1930 AND 1960, WITH ASSESSMENT RATIOS ON RESIDENTIAL HOUSING REPORTED BY BUREAU OF CENSUS, 1962

City	Assessment Ratios		1962 Bureau of Census Ratios for Residential Property Only
	1930	1960	
Baltimore	90	64	55.5
Boston	90	66	34.6
Buffalo	80	60	N.A.
Chicago	37	55	35.5
Cleveland	80	45	35.4
Detroit	90	50	42.9
Houston	50	33	N.A.
Los Angeles	50	23	20.4
Milwaukee	73	53	48.4
New York	90	82	47.6
Philadelphia	90	68	57.7
Pittsburgh	66	55	35.8
St. Louis	65	30	35.6
San Francisco	38	25	11.8
Washington, D.C.	90	55	47.2

Source: Ratios for 1930 from National Municipal Review (December 1931), pp. 707-709; 1960 ratios provided by local officials; 1962 sales-based sample data, U. S. Bureau of the Census, Census of Governments 1962, Vol. II, Taxable Property Values (Washington, D.C.: U. S. Government Printing Office, 1963).

An additional constraint on efforts to improve the capabilities of the cities for educating children is the apparent decline in what is popularly referred to as the "human capital" of the city. In the census data of our

130 largest cities, we find evidence of a shift in the median years of schooling in the adult population; among the 130 largest cities, 39 were at or below the median for their states in 1940; in 1960, 58 were below the median.[8]

In our society the educated are capital assets to a community and the uneducated are liabilities. As long as a city either has empty spaces within its boundaries, or can extend its boundaries, it matters little that educated citizens who are able to win social and economic privileges move out to the edges of the city and those who cannot remain at its core. It is when the educated cross the boundary and leave the city, subtracting their productive skills and their capital wealth from the pool in the city, and adding both to another civil division, that the city is weakened. If for each educated person it loses, the city must accept in exchange an uneducated person, then as long as that pattern of exchange persists the decline of the city is inevitable.

The city schools cannot be charged with the responsibility for this unfavorable balance of trade in human capital, for the graduates of the city schools are numerous among the privileged who have left the city, and are numerous also among the privileged who remain; and rarely are the underprivileged numbered among the graduates of the city schools, or among the children of graduates. Yet the fact remains that the proportion of adults with less education than the state median are increasing in the cities, and that decay and danger accompany that increase.

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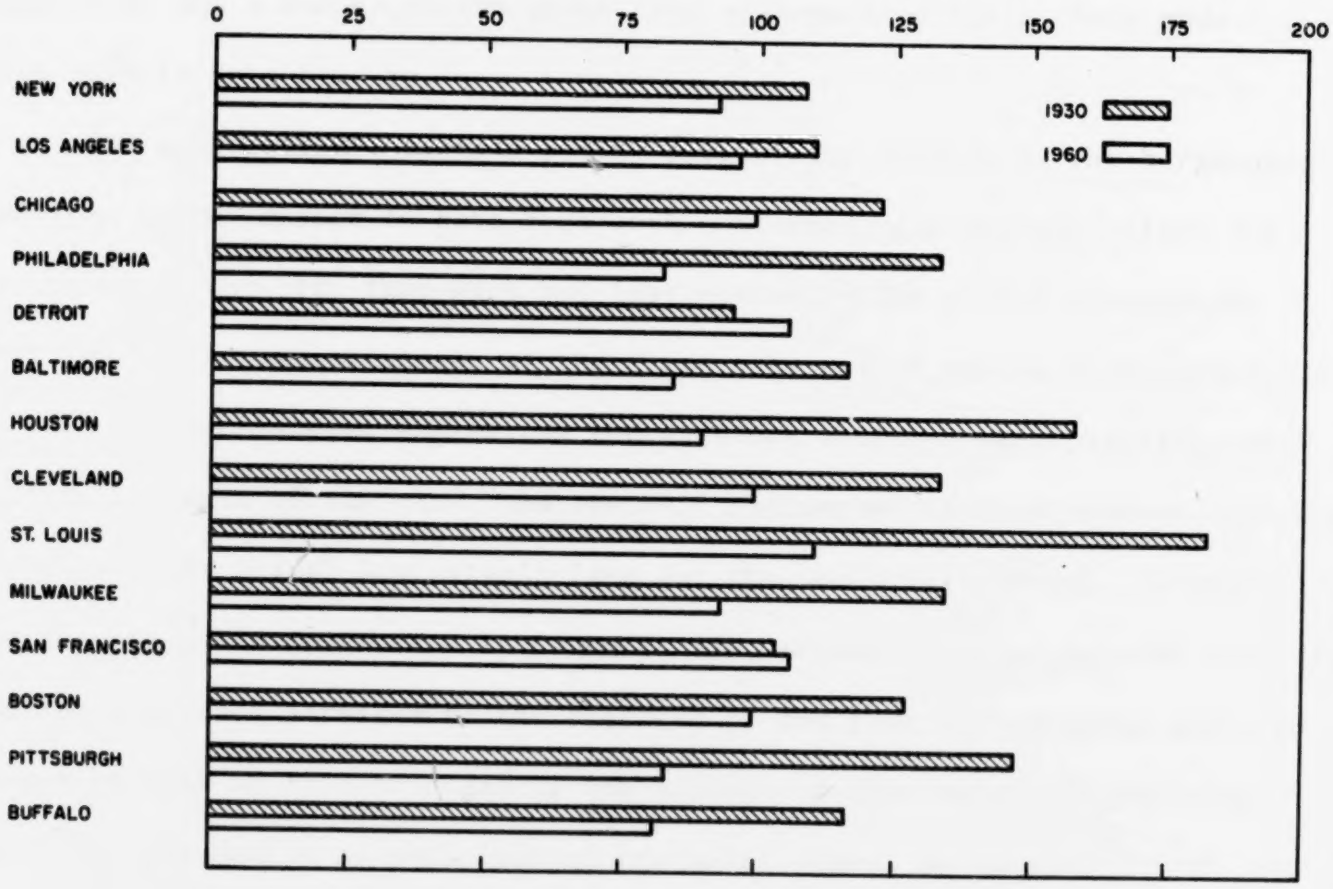
[8] The 58 cities, in order of their size, were 1, New York; 2, Chicago; 3, Los Angeles; 4, Philadelphia; 5, Detroit; 6, Baltimore; 8, Cleveland; 10, St. Louis; 11, Milwaukee; 12, San Francisco; 13, Boston; 16, Pittsburgh; 17, San Antonio; 20, Buffalo; 21, Cincinnati; 23, Denver; 26, Indianapolis; 30, Newark; 33, Oakland; 35, Long Beach; 38, Rochester; 39, Toledo; 44, Miami; 45, Akron; 47, Jersey City; 48, Tampa; 49, Dayton; 56, Providence, R.I.; 57, San Jose; 60, Jacksonville; 66, Worcester; 68, Spokane; 70, Gary; 71, Grand Rapids; 72, Springfield, Mass.; 75, Youngstown; 77, Hartford; 79, Bridgeport; 81, New Haven; 83, Tacoma; 85, Paterson; 86, Evansville; 90, Fresno; 96, Sacramento; 98, Kansas City, Kans.; 103, Camden; 107, Trenton; 109, Canton; 112, Hammond; 113, Scranton; 116, Allentown; 120, Elizabeth; 121, Waterbury; 124, Peoria; 125, New Bedford; 126, Niagara Falls; 129, Utica; 130, Santa Ana. See U. S. Bureau of the Census, Census of Population: 1960, Vol. I, Characteristics of the Population (Washington, D.C.: U. S. Government Printing Office, 1963), Table 13.

The city school system is thus caught in the double bind of facing dramatically increasing demands for services, indeed of having thrust upon it tasks that strain the capabilities of its present structures, at a time when its resources are steadily dwindling, with no turning point yet in sight. The reduced capabilities of the school districts to finance education have resulted in most of the cities in relatively lower expenditures for education, when compared to the average expenditures of the states in which they are located. Figure 2 shows this relative change dramatically in comparing city and state expenditures per pupil in 1930 and 1960.

Substantial efforts toward improving educational programs have in several instances improved this picture since 1960, and federal funds and foundation grants have helped some. However, the hope that society, through the federal government, would take some important step toward balancing these impossibly out-of-balance accounts seemed brighter a year ago than it does at this writing. This still seems the only hope. If there is one generalization with important policy implications to be drawn from this study it is this: local taxpaying ability is the most important determinant of social policy for education in American cities. Until we find the means to reverse that equation, and let social policy determine the resources to be allocated to education, we face a rising sea of troubles in our cities.

FIGURE 2

CURRENT EXPENDITURES PER PUPIL IN SELECTED CITIES SHOWN AS A PERCENTAGE OF MEAN STATE EXPENDITURE PER PUPIL IN 1930 AND IN 1960[a]



[a] That is, the current expenditures per pupil in each city was divided by mean current expenditure for the state in which the city is located.

Sources: City data for 1930 from U. S. Department of the Interior, "Statistics of City School Systems, 1929-1930," Chapter III, Biennial Survey of Education, 1928-1930, Vol. II, Table 6 (A.D.A.) and Table 13 (Total Current Expenditures). State data for 1930 from U. S. Department of the Interior, "Statistics of State School Systems, 1931-1932," Chapter I, Biennial Survey of Education, 1930-1932, U. S. Office of Education Bulletin No. 2, 1933, Table E, pp. 22-23. State data for 1960 from U. S. Department of Commerce, Statistical Abstract of the United States, 1963 (Washington, D.C.: U. S. Government Printing Office, 1963), Table 144, p. 115. City data for 1960 obtained by questionnaire from the districts.

THE SCHOOL IN THE CITY

We often forget how recent is the public school experiment; the oldest school system, Philadelphia's, is less than a hundred and fifty years old, and a number of the great city systems have taken their modern form only in this century.

The early efforts to gain public support for schools in the burgeoning American cities appear to have been more concerned with making a place for the child in the city than with his instruction.[9] The public discussions that led to the establishment of the first city school system in Philadelphia in 1818,[10] for example, emphasized the nuisance children were creating, disrupting business of the city, and the evil influences they encountered there. The Englishman Joseph Lancaster's idea for the monitorial school, in which one teacher could instruct a thousand pupils, seemed to offer maximum custodial and instructional services to the children of the poor at a minimum cost, so he was brought in 1818 to organize the schools of Philadelphia, remaining there for six months as principal of the model school he created.

New York had a long experience with extensive private efforts to support schools, and some municipal assistance was extended, notably to The Free Society of New York; the city school system was established in 1842. Washington had two schools dating from 1806 which were referred to as a "system," but since this "system" still had the original two schools, 250 pupils, and only three teachers in 1840, when 4,401 school-age children were not attending school, we have chosen to date that city's school system from 1845, when the new system was established and taxes were levied specifically for its support. All the other great city school systems of major interest in this study (except Houston) were established by 1850, the great majority being created between 1830 and 1850.[11] The first three cities, Boston, Baltimore, and Philadelphia, all had populations greater than 50,000 when they created their school systems; New York, however, had over 300,000. All the remaining cities established schools while they were still under 50,000; in fact, all but Washington did so while they were under 20,000.

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[9] Lewis Mumford observed that "the city, as we first discover it, seems to belong exclusively to the adult population. . . . Thousands of years will pass before, in the heart of the city, in the grounds around the school and in the nearby playing fields--first in medieval towns, but most notably now in the British New Towns--the playtime activities of the children will claim large swaths of open space." See The City in History (New York: Harcourt-Brace & World, Inc., 1961), p. 79.

[10] The "first" is perhaps technical, since Boston had a "school committee" from 1789; but since the city did not incorporate until 1822, its "city school system" must be dated from that year.

By 1860 all the cities under study except Philadelphia and Houston had superintendents of schools; though the superintendency powers were limited, often only advisory, they increased toward the end of the century when control over the selection of teachers and the materials of instruction began to pass from the school boards to the professional educators, a shift in control that was speeded by scandal.

The superintendency has become still more important during this century, with the extension of the superintendent's role in planning the district budget and recommending it to the board. As we shall see, budgeting is a comparatively recent refinement in public institutions, yet it has already shown signs of becoming ritualized. The budget process and promising new developments and experiments are discussed below, in Chapter III. More often than not today, the superintendent is chosen from outside the district after a nationwide search for the best man available. Joseph Cronin found that since 1900 a total of 103 superintendents have held office in these 14 cities; 61 were selected from outside the district and 42 from inside. He concluded that elected boards are more likely to look outside the system (68 percent of the time they picked outsiders), whereas appointive boards are more likely to pick insiders (53 percent of the time).[12]

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[11] The dates are: Baltimore, 1828; St. Louis, 1833; Pittsburgh, 1834; Buffalo, 1837 (when the city incorporated); Chicago, 1837; Cleveland, 1837: Milwaukee, 1846; San Francisco, 1848 (although schools did not actually open until 1851); Los Angeles, 1850; Houston, 1876.

As we have noted earlier, the second half of the nineteenth century was the period of greatest growth for most of the cities under study. School problems multiplied as a result. Some of the more pervasive problems grew from the practice of ward representation on school boards, for the sheer numbers of board members grew strikingly as wards were added, with the result that boards became unwieldly. Baltimore, for instance, had 26 board members before reorganization occurred in the 1890s; Pittsburgh's board, prior to its reorganization in 1911, comprised 46 members.[13]

The ward basis for board membership also linked the boards in many of these cities to the political scandals of the late nineteenth century and the early twentieth century. There were widespread evidences of patronage in the distribution of school jobs, and in the allocation of textbook orders and construction contracts. Public outrage finally was focused on the problem by a series of articles in The Forum by Joseph Rice, which were later published in book form.[14]

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[12] Joseph M. Cronin, "The Board of Education in the 'Great Cities,' 1890-1964" (unpublished Ed.D. dissertation, School of Education, Stanford University, 1965), pp. 289-91. Mr. Cronin, now a professor of school administration at Harvard, analyzed the historical data gathered by the staff members visiting the cities under study; anyone seeking further detail on the historical development of these city school boards will find his dissertation of interest.

[13] Cronin, p. 117.

[14] Joseph Mayer Rice, The Public School System of the United States (New York: The Century Co., 1893).

The subsequent reform movements included the reduction in the number of board members to from five to fifteen members elected at large, the establishment of an examination system for teacher selection, and a system for applying professional criteria and procedures to the selection of textbooks. The problem of construction contracts was attacked at the state level in all states by requiring competitive bidding, a solution that, while not entirely patronage-proof, made impossible some of the more flagrant violations of the earlier era. The non-teaching staffs also came under some sort of merit selection or civil service system in most, but not in all, jurisdictions. We will return to the effects of these reforms in Chapter III.

The restiveness of the increasingly professionalized teaching staff under lay control is evidenced by the gradual changing of many of the terms used to describe the controllers. Thus, the lay "school inspectors" gave way to "school visitors" and these in turn to professional "inspectors." The professional term was later changed to "supervisor," then to "demonstration teacher," and then to "visiting teacher"; it has now become "helping teacher" in many jurisdictions. The simple fact that seems to be emerging is that teachers, to the degree that they become professional persons, expect to work, not under rules set and enforced by a "boss," but by rules internalized as a part of their professional training. An important issue in the turbulent "professional negotiations" of this decade appear to be the insistence by the teachers that they have indeed come of age as professionals, and that the rules of the autocratic system by which they have been governed must now be rewritten with their advice and consent.

The processes by which board members are elected to office have varied remarkably. The most direct method is election by the voters of the district, and the most indirect method might seem to be that used by Pittsburgh, where elected judges of the Courts of Common Pleas make the appointment, a procedure used also for almost a century by Philadelphia; however, last year that city changed to direct election of a five-man board. It can be argued, however, that Washington, D.C., has the most indirect method of selection, for boards are appointed by the District Court judges, who are in turn appointed by the President of the United States. In the past no Washington citizen has had access by voting to any step in the process by which that Court is formed (and even now that they can vote for the President, their influence is negligible), whereas in Pittsburgh and Philadelphia the voters at least elected the judges. As we note in Chapter IV, however, we could find little evidence that the method of school board selection has any systematic effects on the decisions in fiscal matters.

We turn now to our study. In Chapter II we will discuss the proposal for this study and its rationale; in Chapter III we will examine the school budget process in the 14 great cities, with special attention to the questions of who makes budgetary decisions and how they are influenced. In Chapter IV we present the statistical analysis by which we estimate the influences of various conditions on expenditures for education.

CHAPTER II

RATIONALE AND PURPOSE OF THE STUDY

This study is the third in a series devoted to ordering the field of school finance in theoretical terms. In the two earlier studies, School Revenue Systems in Five States and Wealth, Expenditures, and Decision-Making for Education, we specified the elements of a general rationale for studying school finance. Implicit in the rationale are the assumptions that resources available for the support of public education are rarely sufficient to satisfy all the demands made upon them, and that determinations about the level of public school financial support are almost always made in competitive situations.

The rationale we have formulated postulates three major determinants of educational expenditures in the public sphere:

1. A set of shared expectations for educational services. We have called this condition expectations.
2. The availability of wealth from which funds for schools can be allocated. We have called this condition ability.
3. A political system that allows the expression of demands, and access to the ability. We have called this condition governmental arrangements for decision-making.

Each of these three conditions was presented and discussed in the Ten-State Study,[1] but we will review them again in this chapter for the reader's convenience. In Chapter IV, the specific variables used to measure the postulated conditions will be described fully.

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[1] Hereafter, "Ten-State Study" will be used to refer to H. Thomas James, et al., Wealth, Expenditures, and Decision-Making for Education, U. S. Department of Health, Education, and Welfare, Office of Education, Cooperative Research Project No. 1241 (Stanford, Calif.: School of Education, Stanford University, 1963).

EXPECTATIONS FOR EDUCATIONAL SERVICES

The concept of expectations for educational services, while it has received some attention from other researchers in school administration and school finance, has been relatively neglected as a major theoretical determinant of educational expenditures. The concept is difficult to discuss and measure, both because it is complex and because data related to it in a logical way are not readily available. What is meant by the concept of "expectations for educational services"? What are the relationships between expectations for educational services and educational expenditures? In the following paragraphs, we will discuss a few of the more important issues raised by these questions.

Communities have different educational programs and different levels of school expenditures even when they may have approximately the same financial ability to support schools. One plausible explanation for this phenomenon is that the expectations for educational services held by the public differ among school districts, and are in fact a major determinant of the school district's policies. Expectations for educational services are thus an input influencing the educational system as it processes relatively short term demands upon it. This point of view implies that expectations for educational services are actually translated into educational policy, at least to some extent, and that the resulting policy differences are reflected in variations in expenditure patterns. Our interest in expectations for educational services in this study, and as a part of a general rationale for the study of school finance, is in the effect these expectations have upon the educational expenditures of public school systems.

There are two principal dimensions to the concept of expectations. The first is quantitative: the number of pupils to be educated. Clearly, when two communities are equal in all respects save the number of pupils to be educated at public expense, the community presenting the greater number of pupils to the public schools holds greater expectations for educational services, in a quantitative sense, than the other district. But the amount and kind of expectations for educational services that are attached to each child will also vary according to the educational needs of the community's children and its aspirations for them. These factors represent the second principal dimension to expectations; we may call them differential expectations.

It is reasonable to assume that a majority of the American public holds opinions about what goes on, and what ought to go on, in schools. Most of these opinions are public--that is, the people believe they should become public policy. Yet the public's expectations for educational services are largely passive; they remain within the individual, or are expressed privately and informally. Little reliable information about what the public really thinks about educational issues is directly available to school officials and boards of education. Public opinion surveys are seldom taken; school elections, another potential source of information, are usually held to elect board members or to determine a tax increase. Only rarely is an issue so dominant that the election result indicates the public's expectations on a particular matter.

In short, the expectations of the public, insofar as they are conceived of as specific opinions or attitudes toward the schools, are not easily studied. Psychology has shown us that such attitudes are rooted in fundamental values. Values and attitudes thus are relevant matters of inquiry for students of school finance, although they remain outside the scope of this study.

The concept of expectations for educational services does not rest exclusively within the world of values, attitudes, and opinions, however. What are the kinds of observable behavior that will help us to understand some characteristics of expectations? Although, as we have noted, most expectations for educational services are private in character, occasionally they are overtly expressed to school officials and boards of education. For example, when citizens attend board of education meetings and speak up on a particular issue, they are expressing an expectation for an educational service. Overtly expressed expectations can be conceptualized as demands. Voting can be considered a kind of demand, although it is usually so "issue-general" that its only effect is to indicate to school officials that "more" or "fewer" educational services are desired. Speaking at a school board meeting, organizing a pressure group, and making a complaint to a board member are all examples of overt demands.

Some studies have assessed directly the opinions of the relevant groups--the public, the professionals, the board members. Downey analyzed the tasks of the school and developed 16 classes of curricular areas which were used to describe profiles of expectations.[2] Carter expanded Downey's 16 classes to 42 classes, and differentiated among curricular, service, and task areas.[3] These studies provide scaled dimensions of educational expectations which could be used to predict school expenditures if factors relating to ability and governmental arrangements were held constant. Nevertheless, their approach requires considerable polling of individuals and was not practical for our study (which comprised 107 city school districts), within the limits of time and funds.

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[2] Lawrence W. Downey, The Task of Public Education (Chicago: Midwest Administration Center, The University of Chicago, 1960).

[3] Richard F. Carter, Voters and Their Schools (Stanford, Calif.: Institute for Communication Research, Stanford University, June 30, 1960).

The empirical solution to this problem in both the Ten-State Study and this study has been to identify socio-economic characteristics which logically are related to expectations for educational services. For example, adult populations which themselves have attained a high level of education will usually seek a high level of educational services for their children. An indicator of the level of education taken from census data can then be used as an indicator of educational expectations. Thus, our approach has been to use demographic measures reflecting socio-economic characteristics which on *a priori* grounds appear to be related to expectations for educational services.

At this point we should note that a local school board, which must determine the level of educational expenditures in its district, is limited by state constitutional, statutory, and judicial provisions for education. The statutory provisions may be mandatory or permissive. If mandatory, the board has no choice, since it is legally an arm of the state legislature and must obey legislative decisions. Permissive legislation, though not always considered by boards, is typically a part of the matrix of demands which come before the board and which must be resolved in the board's decision-making process.

In addition to legal provisions, the board faces demands from three distinct groups. First, there is the schools' clientele (parents and students) who are concerned primarily with extending the quality and quantity of educational services offered them (e.g., providing additional library books, or additional specialized teachers with advanced training); second, there is the taxpaying citizen who is chiefly concerned with minimizing taxation for schools (e.g., demands for reduction in local property tax rates or resistance to proposed increases in teachers' salaries); and third, there is the school staff, who are concerned primarily with extending staff benefits.

Among school employees we will differentiate three groups: the professional school administrator, the instructional staff of the school, and the service personnel in the school system. These employee groups will be distinguished (in Chapter III) by differences in the sources of their influence and in the channels through which their influence is communicated. The distinction between extending staff benefits and improving educational services is based on the proposition that increases in staff benefits do not necessarily improve or increase services to the students but may result only in satisfying personal needs of the school staff.

All the expectations relating to educational services, staff benefits, and taxes must somehow be balanced in the process by which communities allocate funds to education. To the extent that the school board participates in this allocation process, it must itself balance these sometimes competing expectations and demands. Later in this report, the hypothesis will be suggested that the balancing of these expectations is a fundamental function and perhaps the paramount function of boards of education.

A major effort was made in this study to observe the way in which the demands described above influenced decisions about financing education in the 14 cities in which field observations were conducted. (A full report regarding those observations is presented in Chapter III, where the budget processes of 14 cities are described and analyzed.) However, in a statistical analysis of school expenditures across a large number of school districts, it is not practical because of limitations of time and resources to measure effectively through observations and interviews the overt demands for educational services. An important empirical question for future study is the relationship, and particularly the extent of congruence, between the expectations for educational services held by the public, and the overt demands on the board of education which presumably reflect the distribution and intensity of expectations held by the general public.

FINANCIAL ABILITY TO SUPPORT EDUCATION

The second component in this school finance rationale is wealth and the concept of ability. The wealth of a community has generally been accorded a paramount role in studies of educational expenditures, for it clearly is a principal determinant of educational expenditures in local public schools. In the Ten-State Study, two principal factors within the concept of ability were discussed, income and the value of taxable property. We reviewed the relevant research, demonstrating that these two factors represent quite different dimensions of taxpaying ability.[4] In the empirical work done in the Ten-State Study, the full equalized value of property and median family income were used as measures of taxpaying ability.[5] Both measures logically are essential to the societal condition (ability) they are intended to reflect.[6]

The relationship between the ability to pay taxes--wealth--and educational expenditures was shown in the Ten-State Study to be a two-way relationship. It was recognized that, "on the one hand, higher levels of of property valuation and income result in higher levels of expenditure for education; and on the other hand, education produces a more efficient labor force, and higher levels of personal income."[7]

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[4] See "Ten-State Study," pp. 4 - 9 , and also Chap. IV of this report for findings related to the relationship between income and property values.

[5] The difficulties in obtaining accurate retail sales data precluded our use of this additional indicator of taxpaying ability.

[6] The difficulties in measuring accurately the value of taxable property are discussed at some length in Chap. IV.

It is reasonable to believe that at any given moment in time (e.g., a 1960 cross-sectional analysis) educational expenditures will be closely related to taxpaying ability. However, economists have clearly demonstrated that over a period of years educational expenditures represent an investment which eventually improves the productive capacity of the labor force. In our market-oriented economy, the productive capacity of labor is supposedly related to earnings. Thus, educational expenditures at one point in time result in increased ability to support education at a later point in time.[8]

Variables logically related to expectations and ability were found in the Ten-State Study to be related to school expenditures in 589 school districts in ten states; using multiple regression analysis, a multiple correlation coefficient of .66 was obtained. (The effects of fiscal decisions made at the state level were partialed out by a variable related to the level of state support.)

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[7] "Ten-State Study," p. 70.

[8] A comparable relationship is observed between expectations and level of education. It has been shown that in the period of a generation level of education affects the general political orientation of adult citizens. Key states that "whether education is the cause of it all, important types of political outlook vary with extent of education. High levels of political participation, a high sense of citizen efficacy, and a high sense of citizen duty occur far more frequently among persons with college training than among those whose formal education ended at the elementary level." See V. O. Key, Jr., Public Opinion and American Democracy (New York: Alfred A. Knopf, 1961), p. 339.

GOVERNMENTAL ARRANGEMENTS

The third condition postulated as essential for the support of public schools is the existence of a political system that allows for both the expression of educational expectations and the access to resources necessary for their realization. The most important factor in the political system is a governmental structure that allows preferences to be expressed among competing private and public demands for resources, among competing demands within the public sector, and among competing demands from different levels of education (e.g., universities vs. public schools). In this study we have focused attention upon the structural arrangements surrounding decision-making. These arrangements have been analyzed with respect to evidences of how they shape results as measured in educational expenditures when factors of ability and demand are held constant.

A principal element in the governmental structure is the local school board, but mayors, city councils, assessors, school superintendents, and any other municipal official who may influence educational expenditures are conceived to be part of the structure. The central concept in this area was identified in the Ten-State Study as decision-making. We gave considerable attention to an analysis of governmental arrangements in which decisions are made, and to indications whether these governmental arrangements facilitate or constrain the expression of expectations and access to resources.

The results of our current study indicate that more than two-thirds of the variation in educational expenditures among large school districts can be explained by measures of economic conditions reflecting ability to support education and measures of social conditions reflecting expectations for educational services. As we suggested in Chapter I, the financial resources of a community and the character of its population are major determinants of that community's educational policy: they set boundaries beyond which we should not expect the decision-making behavior of governmental officials, and the influence of governmental arrangements themselves, to reach.

While an analysis of the structural arrangements surrounding decision-making was not a primary focus of the Ten-State Study, two rough efforts were made to take them into account. In the first, fiscal independence vs. dependence of the 589 school districts was examined. Little basis was found for generalizing across state lines about fiscal independence, but evidence was found that it did have consistent and significant effects on educational expenditures within some states.[9]

In the second effort we used a dummy variable technique to give effect to the state in which a given local school district was found. When this dummy variable was used with ability-demand variables, with expenditures per pupil as the dependent variable, the multiple correlation coefficient increased from .66 to .88. While this substantial increase in the multiple correlation coefficient told us only that there was something about the state in which the districts were located that "made a difference" we chose to hypothesize that governmental arrangements within a state "make a difference" with regard to local educational expenditures. The current study was designed in part to test that hypothesis; as we will report in Chapter IV we conclude that, at least insofar as we have been able to devise accurate indicators of the governmental arrangements, they do not appear to make very much difference.

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[9] See "Ten-State Study," Chap. Six, for a full discussion of these findings.

Despite these successes in explaining variations in educational expenditures, one-quarter of the expenditure variations were not accounted for by the variables used in the Ten-State Study. In addition, some of the explained portion of the variation resulted from the use of a dummy variable, which could only be regarded as a temporary expedient. Other hypotheses need now to be formulated and tested to explain the substantial increase in the empirical power of the rationale when the dummy variable for the state was used.

WHY A RATIONALE?

In the sixty years since Cubberley first defined school finance as a field for study, theory-based research has not been prominent. Research has all too frequently been guilty of "naked empiricism," as larger and larger collections of fiscal data were amassed. In the significant monograph of Coladarci and Getzels, "The Use of Theory in Educational Administration," the authors observed that "the long history of the physical sciences shows rather clearly that observation and measurements, no matter how precise, cannot lead to stable, practical knowledge except through some guiding principles that serve as guides as to what to observe, what to measure, how to interpret."[10] Without explicit theoretical grounds for determining what facts are relevant, knowledge and understanding will not emerge miraculously from data.

A second problem that has plagued research in school finance and in school administration stems from a confusion of the "is's" and the "ought's." Our interest in specifying a theoretical orientation is not at all directed toward prescribing what the fiscal and administrative policies of large city school systems should be. Rather, it is designed to provide a basis for ordering, and thus simplifying, a relatively wide range of phenomena related to how systems do behave. This is not to absolve the researcher from any responsibility for helping to solve some of the problems he has observed in his research. It is simply to differentiate between the world of the decision-maker and the world of the researcher. Policy prescriptions should be clearly labeled as such, and should not be the raison d'etre of research in social science.

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[10] Arthur P. Coladarci and Jacob W. Getzels, The Use of Theory in Educational Administration, Educational Administration Monograph No. 5 (Stanford, Calif.: School of Education, Stanford University, 1955), p. 7.

One last point regarding the use of a rationale: unless the rationale produces hypotheses that can be empirically tested, it is not very useful. Without empirical testing one can never determine whether his particular view of reality is an accurate one. Each of the postulated conditions in this rationale--ability, expectations, and governmental arrangements--has been made operational by specifying quantitative and other objective measures which reflect the economic, social, and political conditions described in the theory. Hypotheses have been tested for each of these measures.

The rationale should be evaluated on two levels. First, empirical tests of the rationale should demonstrate how well the selected measures actually predict the behavior of local school systems in financing public education. Second, it should be judged by whether it has contributed to a more orderly, more simple, and more accurate understanding of school finance phenomena.

There are three basic questions asked by researchers who are curious about phenomena in the real world.

1. What kind of phenomenon is it?
2. Why does it behave the way it does?
3. How can we make it do what we want it to do?

We began this study in an attempt to understand the phenomena which make big city school districts behave the way they do with respect to fiscal affairs. We found that a prior task was to describe the great city school districts' budget processes and other governmental arrangements so that we would have adequate information upon which to build an understanding. We attempted to reserve our thoughts about the third question until the study itself was finished.

In early discussions with the Research Council and its Executive Committee, the director made a distinction between policy-making and the study of the conditions that shape policy. Policy-making, he noted,

> ...is the domain of the decision maker, the man who decides what to do. The atmosphere of this domain is urgent, the problems are immediate, and the decision maker is constantly engaged in drawing on two great banks of data, the technical knowledge he can obtain and the social values of the community he serves, to determine what will go and what won't go in the circumstances he faces. The study of the conditions that shape policy, on the other hand, is the domain of the researcher, the investigator, the man who asks why. The questions he asks are rarely the questions the decision maker wants answered; urgency serves only to distract him, and he searches long and diligently for the few bits of knowledge that are his occasional reward.[11]

WHY STUDY CITIES?

During the past decade the nation's attention has been focused upon the growing problems of America's great cities. The influx of increasingly large numbers of low-income groups has radically altered the social fabric at the cities' core and the capacity of city governments to respond to the problems of these groups has been severely strained. The civil rights movement has probably been more responsible than any other single factor for focusing public awareness on current problems of the great cities. One of the primary functions of the great city in the late nineteenth century and the early twentieth was to prepare the recent foreign emigrant for productive participation in American society. Today, the function is the same, but the emigrant is coming from rural areas of America's own South, rather than from Dublin, Belgrade, or Osaka.

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[11] Unpublished memorandum from H. Thomas James to the Research Council of the Great Cities Program for School Improvement, March 6, 1963.

Today's problems in big city school systems are particularly vexing. As we noted in Chapter I, the cities are caught in a double bind: while enrollments increase, property values typically remain constant or decrease. Similarly, while the demands for superior teaching are increasing, as the schools assume greater responsibility for inculcating needed values and skills in urban youth, the supply of superior teachers dwindles because of increasingly effective suburban competition.

Fiscally, many city school districts are further hampered by an inability to gain more favorable shares of state aid funds from rural dominated legislatures. Recognition is slowly being granted, however, that the great city school systems require very substantial increases in assistance, especially financial assistance, if they are to meet the needs of their residents and of the nation as a whole.

Not surprisingly, this recognition originated in the cities themselves. As early as 1956, the Research Council of the Great Cities Program for School Improvement was formed, as an instrument for focusing the combined resources of 15 city school systems upon their mutual problems and

and challenges.[12] As the rate of change in the social composition of the cities' populations accelerated during the past decade, state governments and the federal government began to take heed of the cities' problems. The state legislature in New York recently authorized a 10 percent increase (later raised to 17½ percent) in state aid for big city school systems. The Supreme Court decision on reapportionment[13] and the subsequent painful processes of legislative reorganization may result in an increased responsiveness from state governments to city needs. The federal government's current "War on Poverty" and related legislation, including in particular the creation of a cabinet post for urban affairs, have brought the power of the federal government to bear upon many of the problems facing cities.

One of the important reasons for studying big city school systems) has been discussed-~~-~~ (is that cities have problems that affect not only the welfare of the citizens of the cities, but the general welfare as well. Understanding the management of city school districts better than we now do should help in solving the problems. To increase understanding of these complex institutions we need not only to improve the quality of our descriptions of their processes, but to test also some of the generalizations now extant in the literature of educational administration. The types of policies and events which are of interest to the student of urban politics and fiscal affairs, such as those events occurring in a budget cycle, are strikingly different in big city school systems from their description in most general school administration literature.

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[12] The Research Council Staff was housed from 1956 until late 1965 in the Administration Building of the Chicago Public Schools. Its offices are currently located at 5400 North St. Louis Avenue, Chicago, Illinois 60625.

[13] Baker vs. Carr, 82 Sup. Ct. 691 (1962).

Reasonably adequate descriptive data about formal governmental arrangements in large cities are generally available through survey reports. However, these reports are often less than candid about known political linkages between the schools and city governments, and particularly about extra-legal and informal working arrangements. The political dimensions of the budget process, the ways in which individuals and groups of citizens influence school board decision-making, and the budgetary functions of boards of education, when treated in most school finance and school administration texts, are likely to be cast in contexts relevant to situations in small and medium-sized school districts. Histories of the governmental structures of the city school systems are not uniformly excellent. Thus, before one can study the effect of certain governmental arrangements upon educational expenditures, one must first know what governmental arrangements--formal and informal--actually exist in cities.

MAJOR PURPOSES AND RESEARCH HYPOTHESES

We have used the general rationale for the study of school finance developed in the earlier studies to help us understand how fiscal affairs are managed in our great city school systems. Our problem was to explain the variation in expenditures for education in large cities. Specifically, we have attempted to develop further the general rationale, primarily in the area of governmental arrangements, and to a lesser extent with respect to demand for educational services, and to apply this rationale in a study of the great city school systems. We have devoted particular attention to governmental arrangements which influence school budget decisions in large cities. However, the task of explaining variations in per-pupil expenditures has been viewed as instrumental with respect to the broader purpose of the study, which was to come to a more sophisticated understanding of how fiscal affairs in large city school systems are managed, and from this understanding, to develop some useful guidelines for fiscal policy in the large cities.

The general hypothesis tested in this study was:

> If factors of demand for education and factors of financial ability to pay for education are held constant among school districts, then variation in the organizational structure for financing education will be associated with variation in educational expenditures.

General Procedure

The sample for the current study comprised 107 of the 119 largest school districts in the United States in 1960. The distribution in ADA ranged from approximately 20,000 to 1,000,000 students. The 107 districts were located in 36 states. The largest number of districts in any one state was 11, in California.[14]

The necessary socio-economic data for the ability and demand clusters were collected from census sources, the expenditures data (adjusted for inter-city comparability) from U. S. Office of Education reports, and the property tax data from local school districts, state tax commissions, and census of governments.[15] Coterminality of city and school district was carefully checked for every district, so that the census data would reflect accurately the geographical area of districts.

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[14] Chap. IV, Table 15, lists the 107 school districts.

[15] For a detailed description of the procedure used in collecting and analyzing the data, please see Chap. IV.

Of the 107 cities in the total sample, 14 are members of the Research Council of the Great Cities Program for School Improvement.[16] The Research Council and its members endorsed this study and extended full cooperation to our staff. Each member of our staff studied one or more of the member school districts of the Research Council. The staff member became intimately familiar with the legal structure in which the school system was placed; with the historical development of the school system and its board of education since the founding of the public schools in that city; with the relationships between the school system and other agencies of government, both local and state; and with the complete budget process of the school system. Each staff member spent two to four weeks in "his" city during the course of the 27 months of the study, observing and interviewing at times when it appeared that strategic decisions about the allocation of financial resources were being made. Staff members observed many public hearings and meetings of boards of education and city councils, but also had access to special budget meetings and executive sessions of boards of education, to school superintendents, to board-of-education members, and to community leaders interested in the school budget.

The 14 cities of the Research Council served as laboratories in which our staff, through extensive observing and interviewing, identified a number of variables which appeared to be important in determining the level of educational expenditures. These factors were included in a questionnaire which was submitted to the remaining 92 cities of the sample. In this manner a type of inductive, case study, issue-analysis approach was used to identify the governmental variables in this study.

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[16] The 14 members of the Research Council are Baltimore, Boston, Buffalo, Chicago, Cleveland, Detroit, Houston, Los Angeles, Milwaukee, New York, Philadelphia, Pittsburgh, San Francisco, St. Louis.

In Chapter III, we will describe the budget processes of the 14 cities in which extensive field work was done. Then, in Chapter IV, we will analyze statistically the influence of economic, social, and governmental factors on expenditures for education in 107 large school districts.

CHAPTER III

THE SCHOOL BUDGET PROCESS IN LARGE CITIES

Schools in big cities are big business. In the 1965-66 school year, the total of $2,231,978,277 will be spent to meet current educational expenses[1] in the 14 great city school districts whose budget processes are discussed in this chapter.[2] New York City, of course, will spend the most; by 1966-67 its annual current expenditures will total more than one billion dollars. The smallest disbursement among the 14 cities, small only in comparison to the other 13, is Buffalo's, whose current expenditures in 1966-67 will be $37,467,000. How is it decided that a big city school system will receive a billion dollars, but no more? Who makes the key decisions in these cities? Who influences those decisions? What generalizations about the budget processes of the great city school systems can be made? One of the major efforts of this study was directed at answering these questions.

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[1] These expenditures data were obtained from the National Education Association.

[2] The 14 cities discussed in this chapter are all members of the Research Council of the Great Cities Program for School Improvement. Washington, D.C., the 15th member of the Research Council, was not included in the study because of its unique governmental structure. The 14 cities are: Baltimore, Boston, Buffalo, Chicago, Cleveland, Detroit, Houston, Los Angeles, Milwaukee, New York, Philadelphia, Pittsburgh, San Francisco, and St. Louis.

AN OVERVIEW OF THE HISTORICAL DEVELOPMENT OF THE BUDGETARY PROCESS IN THE UNITED STATES

Some perspective on budget issues facing schools today can be gained by a brief review of public budgeting as it has developed from the time of the 13 colonies up to the present. One of the major issues during the last two decades of the eighteenth century was the question of how much power the executive branch of the national government should hold.[3] The conflicting points of view each had implications for the budget process. Alexander Hamilton and the Federalists argued that a strong executive was necessary to carry out the functions of government, and that the executive should have wide discretionary authority to transfer funds from one account to another as circumstances demanded. During the 1790s the Federalists were opposed to specific appropriations from Congress because this would limit the power of the executive. When Thomas Jefferson became President in 1800, the position of the Federalists changed, and they attempted to use their influence in Congress to ensure that the hands of the President would be tied by highly specific appropriations.

The Federalists were opposed by the Jeffersonians, who favored specific legislative appropriations. The Jeffersonians argued that since Congress had the respondibility of levying taxes, Congress should control the expenditures of federal funds. In support of their position, they cited the Constitutional requirement that "no money should be drawn from the Treasury, but in consequence of appropriations made by law."[4]

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[3] It will be remembered that the English parliament in the late seventeenth century had been the first to gain effective legislative control over a national "executive" through the "power of the purse." Colonial New England by the same time had already established a form of legislative "power of the purse" in the unique town-meeting arrangement, whose origins can be traced to Athenian democracy, and in the colonial legislatures as well.

[4] For a more elaborate treatment of these positions, see Arthur Smithies, The Budgetary Process in the United States, a publication of the Committee for Economic Development (New York: McGraw-Hill, 1955), p. 50.

During the nineteenth century the Congress consistently attempted, except in times of war, to restrict the authority of the executive branch of the government. One important device it used was the highly specific appropriation, which would tend to prevent the executive branch from doing anything unless Congress had specifically authorized it. It was largely successful in these attempts. The federal budget was negotiated directly between the different executive agencies and the appropriate Congressional committees. The President had little control over its preparation; he was not to achieve centralized control until well into the twentieth century. Smithies points out that these procedures functioned neither to achieve economical and efficient government, because they denied necessary executive flexibility, nor to achieve total Congressional control over items of expenditure, since loopholes in the law always permitted executive agencies to transfer funds in "emergencies" (and the executive branch evidently found a large number of "emergencies" facing it).[5]

The federal budgetary process was no less rational and no less subject to accurate accounting than the budgets of most city and state governments during the nineteenth century, and budgeting practices of local city and school "legislatures"--city councils and school boards--which were in considerable disarray. It is difficult today to conceive of public institutions existing for decades with a budgetary procedure which made it virtually impossible for the appropriating body or the general public to know what its money was being spent for. Yet, this was exactly the situation in city governments until the first decade of the twentieth century. Monies were budgeted in such a way that it was impossible to determine whether expenditures had been consistent with the intended purposes of the appropriating agency.[6]

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[5] *Ibid*., p. 55.

A concrete example or two will serve to illustrate the kind of budgeting which was widespread in cities throughout the nineteenth century and the early part of the twentieth century.[7] Philadelphia's 1911 budget, for instance, included the following item:

> Postage, ice, files, incidentals, meals, repairs, advertising, loans, and entertainment of city and visiting officials . . . . $25,000.

And from the same budget,

> Repairs, hauling and labor . . . . $60,000.

Chicago's 1909 budget contained the following astounding list of services under a single line item of the budget:

> For repairs and renewals of wagons and harness, replacement and keep of livestock, identification, police telegraph expenses, rents, repairs and renewal of equipment, hospital service, printing and stationery, secret service, light and heat and 25 more horses and equipment for mounted police and for repair of Hyde Park Station; also other miscellaneous expenses . . . . $205,000.

It is apparent that legislative scrutiny of executive performance was almost impossible when budgetary items were constructed like the three illustrated above. This lack of adequate budgetary procedures was not unwelcome to some in an age when urban politics was rough-and-tumble, frequently corrupt, and subject to few of the legal and ethical constraints taken for granted today. Frequently, the legislators designing all-inclusive line item appropriations were just as anxious as those in the executive branch to conceal fiscal operations from public scrutiny.

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[6] In 1909 there had been no audit of the accounts of the state of California since 1889!

[7] These examples are from Herbert R. Sands and Fred W. Lindars, "Efficiency in Budget Making," The Annals, American Academy of Political and Social Science, XLI (May 1912), pp. 138, 139.

A number of significant budgetary reforms have occurred at both the local and the federal level during the twentieth century.[8] The first significant change in budgetary procedure occurred in New York City in 1906 when the New York City Health Department, with the assistance of the Municipal Research Bureau of New York City, prepared "the first scientific municipal budget" in America.[9] Other branches of the New York City government followed suit shortly thereafter, and shortly after 1910 the first public hearings on a local government budget occurred there. Other cities began to follow New York's lead in budget reform. Thus, in 1910 Chicago re-structured its budget and separated its appropriations according to rather specific categories.

At the federal level, the Taft Commission on Economy and Efficiency reported in 1912 that substantial reform in federal budgeting practices was needed in both the executive and the legislative branches.[10] The Commission recommended that in the federal budget, expenditures should be classified in terms of programs or functions. Another important recommendation urged that a single budget be prepared by the President for the executive branch of the government to replace the practice of direct negotiation between departments and Congress.

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[8] Charles S. Benson, The Economics of Public Education (Boston: Houghton-Mifflin Company, 1961), pp. 476-80.

[9] Sands and Lindars, p. 139. Presumably, "scientific" refers here to the use of relatively specific line items.

[10] Commission on Economy and Efficiency in the Government Service, 62nd Congress, 2nd Session (1911-1912), House Document 854, Vol. 114.

Serious federal consideration of the Commission's recommendations was delayed because of World War I. Less preoccupied with world affairs, several state legislatures established economy and efficiency commissions as a result of the Taft Commission recommendations. Within a few years, more than half the states had established budget research agencies. Establishing systematic budgets became politically acceptable in many states. In 1913 alone, six states enacted budgetary legislation.[11]

After World War I Congress enacted the Budget and Accounting Act of 1921.[12] This act had three purposes: first, to require a comprehensive presidential budget for the executive branch; second, to establish the Bureau of the Budget to assist the President in preparing his budget; and third, to establish a General Accounting Office which would function as the auditing agency of the government and would be responsible largely to the Congress itself, rather than to the President.

The municipal reform movement of the first part of the twentieth century made budget reform easier in many cities.[13] Similarly, the growth in the professional stature and legal authority of school superintendents or business managers (a change in which some of the great cities led the country) during the latter part of the nineteenth century and the early part of the twentieth made it easier to introduce executive control of budgetary preparation in public school systems. As the authority of school superintendents over budget-making was increased, as reforms in the structure of the budget itself were introduced, and as the size of school boards was reduced, the mode of operation for school board budget review tended to shift from a committee plan to a committee-of-the-whole plan.

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[11] A. E. Buck, Public Budgeting (New York: Harper and Brothers, 1929), p. 14.

[12] Smithies, p. 72.

[13] Jesse Burkhead, "The Budget and Democratic Government," as reprinted from Roscoe C. Martin, ed., Public Administration and Democracy: Essays in Honor of Paul H. Appleby (Syracuse: Syracuse University Press, 1965).

One of the principal budgetary reform proposals to be made in this century is program budgeting. The usual method is to classify expenditures solely by object (e.g., truant officers); by contrast a program, or performance, budget is one in which expenditure classifications reflect an agency's functions, or overall purposes and goals (e.g., retain all high school age children in school). As early as 1912 (the same year the Taft Commission published its recommendations), Frank Bachman suggested that city school systems arrange their accounting procedures so that the cost of educational services could be weighed against such factors as the proportion of children in a given age group who were attending school, and the quality of instruction.[14] By using this budget format, it would presumably be possible to examine certain measurable kinds of performance in relation to cost.

Slow to catch on, the idea of performance budgeting was given renewed impetus by the Hoover Commission in 1949. Even at that time, though, it is probable that no governmental agency--local, state, or federal--was using a performance budgeting system. The idea has gradually, but slowly, gained acceptance both in and out of government since the Hoover Commission's report. It was not until 1965 that the program budgeting concept became the official policy for the executive branch of the federal government.[15] The late 1960s should witness a major effort to re-structure federal accounts along "program" lines, similar to the manner in which Secretary McNamara has developed the Department of Defense's budget.[16] Later in this chapter, we shall return to the concept of program budgeting, after discussing in more detail the existing budget processes in the great city school systems.

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[14] Frank P. Bachman, "Attaining Efficiency in City School Systems," The Annals, American Academy of Political and Social Science, XLI (May 1912), pp. 158-76.

[15] U. S. Bureau of the Budget, Executive Office of the President, "Planning-Programming-Budgeting," Bulletin No. 66-3, a memorandum to the heads of executive departments and establishments (October 12, 1965).

Budgetary issues prominent in the nineteenth century and the early part of the twentieth are still controversial in large city school systems. Both executives (school superintendents) and legislatures (boards of education) may still attempt to use the budget to decrease the power of the other. In some cities, leaders of several departments of the school system still negotiate their budget directly with the board of education. Notwithstanding these and other persistent issues, budgeting in the great city school systems is vastly improved over the primitive budgeting practices of a half-century or more ago.

THE BUDGET PROCESS AS A CONCEPT

The central phenomena in our analysis of budget processes are the concepts of decision-making and influence.[17] This chapter reports our studies of the school budget process in 14 large American cities, with particular emphasis on these concepts.

In discussing budgets, it is useful to differentiate between the budget document itself, defined as a statement forecasting the expected revenues and expenditures of a school system during a stated period of time, and the budgetary process, defined as a series of events functioning to determine the allocation and distribution of funds for a school system.[18]

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[16] See, for instance, Daniel Seligman, "McNamara's Management Revolution," Fortune, LXXII, No. 1 (July 1965), pp. 116-20.

[17] The term "influence" is not in any way meant to be invidious.

The range of events that occur during the budget process in a large city school system is wide indeed. It includes all the detailed work within a school system during the early stages of budget preparation, decisions made by the superintendent of schools as he recommends a budget to the board of education, the attempts by employee organizations and by community associations to influence the superintendent's or the board's decisions, final budgetary decisions by the board of education, attempts to obtain state financial aid, and where appropriate, decisions by municipal officials who are empowered to review the school budget. A full cycle of these events frequently is more than 12 months long, so that the end of one cycle may overlap by several months the start of the next.

Given the complexities of a big city budget process, it is necessary to simplify it for purposes of analysis by differentiating among the events in some way. One way we have found useful is to distinguish three "stages" --or sequential parts--of the budget process: preparation, determination, and execution. All the activities occurring prior to the first legally-defined decision-making point in the budget process constitute the preparation stage. The determination stage includes all of the legally-defined decision-making points in the budget, and the execution stage is simply the administration of the budget once it has been legally adopted. Our analysis was focused on the stages in which the budget was prepared and determined, and these two stages are discussed at length below.

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[18] This distinction is treated extensively in Ernest G. Lake and Alfred D. Simpson, "The Budgetary Process" in R. L. Johns and E. L. Morphet, eds., Problems and Issues in Public School Finance, National Conference of Professors of Educational Administration (1952), p. 324.

The budget process is affected by many elements of a city's governmental structure, such as constitutional and statutory provisions (both permissive and mandatory), which shape the environment in which decisions are made; urban-rural legislative apportionment; municipal or county review of school budgets; budget or expenditure limitations; the allocation of taxing powers; tax rate limitations; and the assignment and use of tax bases for both school and non-school purposes. The budget process includes both formal and informal patterns for communication and influence directly related to decision-making about resource allocations. In addition, many individuals participate in a budget process, including school employees, members of boards of education, members of city councils, mayors, and many private citizens interested in the public schools.

To illustrate the complexities of budget processes in large city school systems Appendixes B and C present a description of the budget process of one fiscally dependent school system, New York City, and one fiscally independent school system, Los Angeles. These descriptions are intended to inform the reader who may not personally be familiar with big city budget processes. The reader is urged to refer at this time to these Appendixes before continuing to read the remainder of this chapter.[19]

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[19] In each of the 14 cities, a member of our staff spent a period of several weeks observing meetings, studying documents, and interviewing appropriate public officials and private citizens. On the basis of this fieldwork, a paper was prepared describing the budget process for each of the 14 cities. In addition, papers were prepared describing in some detail the historical development of the cities (see Chapter I). The staff used these papers in identifying variables for use in the multiple regression analysis of the data from the 107 district sample, but substantial attention was also given to the sample of 14 cities as a separate unit for analysis.

BOUNDARIES AROUND BUDGETARY DECISION-MAKING

It is important to emphasize a point made in Chapter II, namely, that the financial resources of a community and the character of its population set "boundaries" beyond which it is unrealistic to expect educational administrators and school boards to move given existing governmental arrangements. We have mentioned the socio-economic boundary, but there are two other major types--legal and traditional--as well.

First, federal, state, and local laws and rulings limit the alternatives available to decision-makers involved in the budget process of the big city school system. Court decisions on rights of property and on human rights, legislative mandates, fiscal restrictions, and municipal policing powers all take precedence, and consequently reduce the discretionary authority for school decision-making. Second, and perhaps as constraining as legal restrictions though not nearly so visible, is the tendency in big city school systems for the administrative arrangements to become so formal and inflexible that they sometimes impair the functioning of the institution and reduce its potential for adaptability.[20,21] Thirdly, socio-economic conditions may further reduce the alternatives for action. In the multiple regression analyses reported in Chapter IV, we find that more than 70 percent of the variance in educational expenditures in 107 large cities could be

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[20] Later in this chapter we will comment on the use of budget "formulas" as an example of an inflexible administrative arrangement.

[21] For a perceptive treatment of how one urban school bureaucracy functions in the field of personnel, see Daniel E. Griffiths, *et al.*, *Teacher Mobility in New York City* (New York: Center for School Services and Off Campus Courses, School of Education, New York University, 1963).

explained by measures of economic conditions reflecting ability to support education and measures of social conditions reflecting demands for educational services (without any consideration of budgets and decision-makers). In addition, competing demands for other (non-school) governmental services are more significant in cities than in smaller districts, and the age of the school plant (e.g., the many schools built before 1900) also constrains fiscal leeway for city schools. Thus, decision-making about school budgets must be viewed in the context of several de facto limitations on the discretion of the decision-makers.

THE PARTICIPANTS IN BIG CITY BUDGET PROCESSES

The participants in big city school budget processes can be divided into three major types: first, those who hold legally-defined decision-making positions in the budget process; second, employees of the school (excluding those few who hold decision-making positions); and third, individuals and groups in the community (excluding board members and other decision-makers). These three types of participants can be further divided into a total of seven categories. Among the legally-defined decision-makers, there are (1) the professional school administrator, (2) the members of the board of education, and (3) in some cities (where appropriate) the municipal officials and voters who have the authority to affect educational expenditures.[22] School employees can be separated into the professional teaching staff of the school, and non-certificated service personnel. Finally, we can distinguish between the clientele of the school--i.e., parents--whose primary orientation is toward educational services, and those citizens whose primary orientation is the minimization of local property taxes and public expenditures.

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[22] The roles of municipal officials and voters in these decisions vary greatly among school districts. See the "Ten-State Study," Section 3, for Harold Dyck's typological analysis of these relationships.

Each class of participants clearly can exert or mobilize power or influence in the budget decisions of urban schools. The seven categories can be distinguished by differences in the sources of their power and in the channels through which their influence is communicated. We make no claim that the seven categories are either mutually exclusive or exhaustive.

THE BUDGET PROCESS

Earlier we noted that a school budget process could be thought of in three stages: preparation, determination, and execution. The preparation and determination stages will be discussed in some detail below. The discussion will focus on the seven classes of participants, and the part played by each during the budget process.

Preparing the Budget

A great deal of preliminary work must be done by the administrative staff of a school district before the superintendent of schools (or in some cases, a co-equal business manager) makes a firm decision about the budget he will recommend to the board of education. Information must be collected about past expenditures and projected enrollments, about teachers' salaries in other districts, about state aid and the prospects for increasing it, about the demands for wage increases likely to come from employee groups and the demands from community groups for additional educational services. Organizing this information for decision-making and (in fiscally independent districts) screening it through the reality-test of probable revenue levels are the principal activities of school budget officials during the preparation stage.

To prepare this vast array of information requires time and technical knowledge, both of which are available in the school staff; the complexity of a big city budget increases the importance of technical knowledge and therefore places substantial power for budget preparation in the school staff. Later, we will discuss the degree to which the power of the board of education to shape the budget is limited by the concentration of budgetary expertise in the professional staff.

Formality in the Budget Process

Our field staff noted marked variations in the degree of formality with which the budget preparation process is carried on and in the extent to which individual staff members are involved in the process.[23]

In one city that typifies a pattern of wide formal involvement, the preparation of the budget starts with the system's principals, who fill in budget request forms in prescribed ways. The forms flow upward through channels of authority on a strict schedule, pausing at various review and approval stations along the way. When all requests as modified by the various approving authorities have been compiled, the superintendent and his staff develop a budget proposal for presentation to the board.

In another city a pattern of centralized informal participation by a few key staff members is observed. Budget preparation is delegated by the superintendent to a staff assistant, who adjusts last year's budget by adding amounts reflecting increased price levels, salary changes, and increased enrollments. Beyond this, he relies on occasional phone calls from supervisors and principals, who may make special requests for changes in programs. The superintendent reviews the budget draft and passes it, relatively unchanged, to the school board for approval.

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[23] The descriptions of the budget process for New York and Los Angeles (contained in Appendixes B and C) illustrate the complexities of organizing and screening information during the budget preparation process.

Formulas

While school superintendents and their budget directors are deciding upon salary levels of certificated and non-certificated personnel to recommend in their budget proposals, a separate budget process is under way in the area of supplies and equipment. To budget for supplies, materials, and even personnel, the typical procedure is to utilize a formula based upon the enrollment in a school or district, the number of teachers in a school or district, or a similar quantitative index. For example, a school district may decide through experience that a certain amount of money per pupil is required for art supplies in the elementary schools. This amount is used as a formula during the budget preparation period to determine how much will be required for elementary school art supplies, and is also used during the execution phase of the budget to determine the exact appropriations to be made to each school or district. Cities differ in the extent to which they require itemized lists to support budget requests for equipment, but the use of formulas is widespread both among cities and across a variety of budget categories within a city.

Formulas are also frequently used to determine the allocation of personnel. A city may determine from experience that a school with under 500 pupils needs a half-time clerk, a school with between 500 and 1,000 pupils needs a full-time clerk, etc. The allocation of teachers to a district or building is often made on the same basis. Suburban or rural schoolmen, accustomed to less bureaucratic budget procedures, may feel that this use of formulas is mechanical and inflexible. When a school system has hundreds of schools, however, it is not surprising that the search for equitable patterns for the distribution of materials and personnel leads to the use of universalistic formulas applied throughout the system.

One consequence of the use of formulas is the centralization of budgetary decision-making. Participation in the budget process by individual principals was observed in only 7 of the 14 big city school systems studied, and then not in roles of central importance. For instance, where principals are involved in the budget process, their activities include such tasks as supplying neighborhood enrollment projections used in the central office for applying formulas, and preparing requests for special building alterations and special items of equipment.

Generally speaking, it is difficult to change or adjust the formulas, even from one year to the next. Further evidence of the stability of these formulas over time is found in expenditures data (13 of the 14 cities reporting). Between 1959-60 and 1965-66, for instance, there was little change in the percentage distribution of total expenditures among various categories of expenditures. The only exception to this pattern was in expenditures for transportation; despite a rapid rise (57 percent) during the past six years, perhaps attributable to the civil rights demands for integration, transportation still accounted for only 1.1 percent of the total current expenditures for 1965-66 in the 13 cities. (See Table 6.)

Despite the traditional inflexibility of formulas, however, examples could be cited of their having been adjusted to meet local needs. In Chicago, a selected district was provided with extra remedial teachers; in Los Angeles, technological progress made possible a change in maintenance formulas; in New York, the "More Effective School" plan substituted a "saturation" for a "normal" staffing pattern; in St. Louis, a slum district was given an increased allotment of teachers. Similar instances could be cited in almost every city, but generally they occurred only as a result of severe political pressures.

TABLE 6

TOTAL PERCENTAGE DISTRIBUTION OF CURRENT EXPENDITURES OF 13 CITIES, 1959-60 AND 1965-66[a]

Category	1959-60 (Actual)	1965-66 (Budgeted)
Administration	2.6%	2.7%
Instruction	72.3	72.3
Operation and Maintenance	14.9	14.0
Fixed Charges	7.8	7.3
Attendance and Health	1.7	1.6
Transportation	.7	1.1
Other	- -	1.0

[a]Sources: U. S. Office of Education, 1959-60 data; National Education Association, 1965-66 data.

Teachers and Salaries

The largest single item in any school district budget is teachers' salaries. During the preparation stage of the budget process, teachers' salaries and other benefits are a major item of concern, both to representatives of teacher organizations and to the administrative staff of the school district. In virtually every city we studied, some form of salary demands were received from teacher organizations during the preparation stage of the budget process. Teacher organizations, including those affiliated with the American Federation of Teachers and with the National Education Association, prepared specific salary demands and submitted them either to the superintendent or to the board of education. In some instances, these demands were received in the form of a letter or brief memorandum, with little follow-up negotiations. In other instances, though, substantial communication was observed between representatives of teacher organizations and the administrative staff responsible for preparing the budget. In either circumstance, teachers' salaries were uppermost in the minds of budget directors as they were preparing the budget.

In Chapter II we distinguished between demands related to staff benefits and demands related to the extension of educational services, and commented that the two were not necessarily the same. With few exceptions, the demands from teacher organizations tend to relate to staff benefits, such as salary increases or released time, and not to the extension of educational services.[24]

The timing of collective bargaining with teachers, in relation to the legal schedule of events during a budget process, is an important consideration in the preparation of a big city school budget. In the few cities in which teachers' unions have succeeded in establishing a collective bargaining agreement with the board of education, negotiations over salaries are usually continued into late stages of the budget process. When a union negotiation will not be concluded by the end of the budget process, budget officials have only two realistic alternatives. They can ignore the fact that costs will obviously be incurred as a result of later negotiations; if they do, then supplementary funds must be obtained from whatever sources are available (such as from the Mayor in fiscally dependent New York City).

An alternative more consistent with the conception of a board of education as an independent policy-making group is to estimate in the original budget the minimal costs of the future collective bargaining settlement. In

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[24] An exception to this general observation is the More Effective Schools Program, supported by the United Federation of Teachers in New York. Proposed increases in this program were a part of the U.F.T. demands during 1965 contract negotiations, but the cost of these increases was quite small compared with the cost of salary and working condition demands being negotiated at the same time. See Appendix B.

New York City, where the strength of the teachers' union is greater than in other cities,[25] the superintendent and board included $20 million in their budget to cover teachers' demands. This action, of course, notifies the union as to the amount the board has available to meet its demands, thus operationally becoming a minimum beneath which the union will refuse to settle. Far from accepting that amount, however, the United Federation of Teachers in New York City pressed for funds over and above the $20 million estimate, and eventually obtained a settlement of $65 million, agreed upon through mediation (and a supplementary appropriation) from the Mayor of New York City.

The success of a teachers' union in pressing its demands upon either the board of education or the city official responsible for the school budget is a function of many factors, including the solidarity of its support among rank-and-file teachers, the militancy of union leadership in threatening a strike, the revenue flexibility of the board of education, the political importance of unions, and the local attitude toward union membership for public employees. For instance, a teacher's strike threat would probably be perceived less favorably in some cities than in New York City owing to the different ways in which unionism as a general phenomenon is viewed in various cities. Where teachers' organizations do not have power to bargain collectively, the factor of contract timing is not yet a problem. Although cities that do not now have a collective bargaining agreement are witnessing a steady increase in the participation of teachers in matters related to their own welfare, teacher organizations are not yet the paramount influence on budget decisions in a majority of these cities.

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[25] Approximately 75 percent of New York City's 45,000 teachers are members of the United Federation of Teachers.

Whether or not the increased participation of teachers in the management of urban schools is desirable is a matter of opinion. On the other hand, the nationwide struggle of teachers to promote their interests directly with boards of education has been viewed with some alarm by those who label it a dangerous intrusion of labor-management concepts into a professional realm. Wildman and Perry identify two assumptions underlying the theory and practice of collective bargaining, and question whether they are appropriate to a professional situation:

> the assumption of significant and continuing conflict between the managers and the managed in any enterprise, and . . . the corollary assumption that there will be a strong, identifiable community of interest and consensus within the employee group with regard to large numbers of items and areas of judgment on which there will be conflict with the managing authority.[26]

On the other hand, the traditional role of the beneficent but essentially authoritarian superintendent of schools, who himself represents the staff's best interests in negotiations with a board of education, does not apply in many large cities today. Two observations can be cited in support of this conclusion. First, teachers do not necessarily perceive the big city superintendent as their spokesman, despite his widely accepted status as the titular head of the hierarchy. Rather, they increasingly view him as the board's man, as management, whether the superintendent is an "insider" or an "outsider." More often, the real spokesmen for the instructional staff are found at the level of deputy, associate, or assistant superintendent, except in areas in which teachers' unions refuse or discourage membership by administrators. Second, attempts by teachers' unions to negotiate labor-management contracts can be viewed as the substitution of written law and due process for informal agreements and even human caprice. Such a substitution, after its accomplishment, is generally regarded as progress.

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[26] Wesley A. Wildman and Charles R. Perry, "Group Conflict and School Organization," Phi Delta Kappan, XLVII, No. 5 (January 1966), p. 245.

We conclude then that teachers' salaries and working conditions are the paramount issues facing decision-makers in big city budget processes, but that there is considerable variation in the arrangements through which teachers express, or bargain for, their interests. In most instances, however, demands for teachers' salaries are presented to the superintendent of schools or his budget director at an early date in the budget process so that changes in teachers' salaries can be reflected in early stages of budget preparation. Teachers also carry their demands directly to boards of education and municipal officials later in the budget process.

By contrast, we should note that generally during the preparation stage there is no similar channel open for formal communication from those who seek additional educational services. Community associations interested in extending educational services are rarely consulted by administrators. It is true that some groups (e.g., civil rights) press for policies and services on a year-round basis, but the board's public hearing is still the first available opportunity for these groups to express their views directly to the board. By that time, however, the budget is already prepared. Major changes may be difficult at a later stage, because of revenue limitations, and because the changes would probably require a corresponding decrease in another expenditure category, such as teachers' salaries.

Of course, demands from teacher organizations are not the only influence on school budget directors as they consider their recommendations for teachers' salaries. State laws may establish minimum levels of teacher's pay. Another factor is competition, primarily in the particular city's labor market but also with respect to other large cities across the country. The Research Council of the Great Cities Program for School Improvement regularly provides data to its members on salary levels in other cities. One school budget director commented, for instance, that in deciding upon the level of teachers' salaries to recommend to the board of education, he attempted to keep his district's minimum teacher's salary equal to that of the highest paying suburb in his metropolitan area, and to keep increments and maximums at the median of the cities in the Research Council. We conclude that demands from teachers themselves, competition for teachers in the labor market, and of course, the revenue situation are the principal factors in the issue of teachers' salaries.

Service Personnel

In most cities, non-certificated service personnel are organized into a number of unions and employee associations that negotiate their salaries and working conditions with senior administrative officials and boards of education. Sometimes closely linked with partisan political power or organized labor, the non-certificated employees exercise significant influence during the preparation stage of the budget process in most cities.

The channel for communication between this group, the superintendent of schools, and the board of education is frequently through an assistant superintendent of schools for business (called a secretary of the board or business manager in some districts), who functions as the spokesman for service personnel. He is usually, but not always, more responsive to local political norms than to the type of national professional norms with which other school administrators identify. The business manager may, in fact, possess a very substantial degree of influence over fiscal decisions in city and state government, and may serve over a period of decades as the principal liaison between the educational and political worlds.

The power of service personnel in several of the great cities achieved such importance during the nineteenth century and the early twentieth century that their spokesman reported directly to the board of education and not to the superintendent of schools. In several cities, this pattern has persisted.[27] Where this occurs, two or more separate budgets may be presented to the board, or the business manager may prepare the budget for all school departments and submit it directly to the board. This arrangement usually represents a bifurcation of power, where educational policies are the domain of the superintendent of schools and fiscal policies are the concern of the business manager, but frequently the division of power is not even, particularly where a strong business manager uses fiscal power to determine educational policy.

According to traditional school administration doctrine, this so-called "two-headed monster" is an ineffective administrative arrangement. Whether this is a fair evaluation is conjectural, but it is a matter of record that some big city systems have been governed with apparent harmony by two or more co-equal administrators for many years. In other cities, however, the harmony may be more apparent than real. Instances were reported to our research team of internal disputes over such things as whether a financial surplus existed. The finance man denied the existence of surplus funds, but his co-equal, the superintendent, claimed there were monies available for spending. Since financial reports showing account balances were not prepared for system-wide distribution, the superintendent was forced to rely upon information supplied from unofficial accounts kept by one of his men. In another instance, an administrative co-equal of a superintendent reportedly "leaked" a confidential "minimum budget" memorandum to powerful community taxpayer groups, thereby setting the stage for a storm of controversy at budget-hearing time.

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[27] In 1960 St. Louis had five executive officers who reported to the Board (the Superintendent of Instruction, the Secretary-Treasurer, the Attorney, the Auditor, and the Director of School Buildings), but St. Louis has since designated the Superintendent of Instruction as the chief executive of the system. In Milwaukee the Superintendent of Schools and the Business Manager report to the Board. In Detroit it is the Superintendent of Schools and the Business Manager; in Cleveland, the Superintendent, the Clerk-Treasurer of the Board, and the Business Manager; in Philadelphia, the Superintendent and the Secretary-Business Manager (at present one man holds both positions). In Cleveland the Board of Education has moved to strengthen the Superintendent *vis-à-vis* the Business Manager and Clerk-Treasurer.

Typically, service personnel have been the last school employee group to be placed under civil service (or tenure laws) and thus be removed from the influence of municipal patronage. In some big cities today, custodial and maintenance personnel have not been fully placed on civil service status; "temporary" or "pending" appointments are sometimes used to employ service personnel without full civil service status. During the 1960s there have been damaging scandals attracting widespread public and legislative attention in at least two cities (St. Louis and New York) where misconduct by non-civil-service personnel was noted.

A close relationship between the city government and the school government in some big cities, particularly in fiscally dependent school districts, has led to many attempts on the part of city administrators to have identical school and city salaries for similar grades of personnel. School administrators in such districts typically resist these efforts. This dispute is a symptom of the continuing ambiguity, discussed later in this chapter, with respect to whether a fiscally dependent school district is a municipal or a state agency. Courts have consistently held that the schools are a state agency, but fiscally dependent districts are usually regarded by city officials as a municipal department.

Boards of Education

The extent to which a board of education becomes involved in the budget process during its preparation stage apparently depends on the superintendent of schools. In districts where the superintendent wishes to involve the board intensively at this stage, board members, and perhaps a board budget committee, will informally exchange viewpoints with budget officials. In other districts, however, the first knowledge the board has of the school budget is the superintendent's formal presentation to them.[28]

While school officials or board of education members may consult municipal officials regarding the fiscal outlook for the city as a whole, it is unusual for municipal officials to become involved in the details of preparing the school budget even in fiscally dependent school districts. The budgets prepared by superintendents and boards in fiscally dependent cities are usually reduced in size when subjected to the lenses of political reality by municipal officials, who alone have the authority to levy taxes and who must then answer to the public for their actions. We will comment later on the relationship between fiscal independence and actual expenditures.

Budget preparations by school administrators in fiscally dependent cities tend to show greater increases in proposed expenditures (when compared to the previous year's level of actual expenditures) than budgets prepared by school administrators in fiscally independent school districts. In fiscally independent districts, the superintendent's immediate reference group--the board of education--is itself responsible for levying taxes and will usually tend to treat school budget requests more conservatively than the board in a fiscally dependent city. This difference is consistent with the behavior of school administrators as they formulate a budget; administrators in fiscally dependent districts tend to permit a more generous level of requested expenditures in the budget than in the dependent districts.

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[28] See, for instance, Joseph Pois, The School Board Crisis: A Chicago Case Study (Chicago: Educational Methods, Inc., 1964).

Although some boards of education as well as municipal officials in fiscally dependent districts do not play an active part in budget preparation, it is evident in some cities that quite early in the budget process the superintendent and his budget director have discussed the revenue and expenditures outlook for the coming budget with members of the board (and with municipal officials, where appropriate).[29] In many cases, the administrative staff has in mind a definite dollar amount, or percentage figure, which they believe the board will accept.

In one fiscally dependent city, not subject to state imposed maximum levy limitations, a consensus between city and school officials was apparently sustained for several years that the total property tax rate for school and city purposes would not exceed a certain amount. School administrators requested that school personnel "hold the line" in their budget requests, and balance any necessary increases by corresponding decreases in other areas. In another school district, fiscally independent of city government, it is customary for a member or two from the board of education to communicate quietly with the local Chamber of Commerce leaders to reach an agreement about what the school property tax rate ought to be for the following year. The amount of revenue that such a rate would produce then becomes the de facto ceiling below which budget requests must be fitted.

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[29] Some cities, such as St. Louis, are on a two-year budget cycle, because of bi-annual tax elections; during the second year, available revenues are known quite accurately before the budget process begins.

Thus, although boards of education, city officials, and community organizations do not ordinarily play an important role in the preparation stage of a big city school budget process, their influence at that stage may be present through an informal budget ceiling known to top administrators. Such predetermined ceilings, approximate though they may be, reflect existing political and economic realities and obviously affect many detailed decisions that must be made during the budget preparation stage.

The presence of predetermined budget ceilings, hammered out on the anvil of local political and fiscal realities, challenges the decision-making model that characterizes the discussion of the budget process in some school finance texts. These texts assume that educational need and policy largely determine expenditures; but the budget process of big city school districts, and perhaps most of the other school districts as well, simply is not primarily characterized by a "rational" determination of the educational needs of children. For too many years, big city school systems have had the quality of their services determined by the revenues available, and not by the needs they served. As we have observed earlier, this would appear to be a poor public policy that needs reversing if we would reverse the troublesome trend in urban education.

Determining the Budget

The Superintendent

The decision by the superintendent and top school staff members about the budget to be recommended to the board of education is the first major event in the determination stage of a big city school budget process.[30]

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[30] We have noted earlier that in some districts part or all of the budget may be presented directly to the board by a business manager or other school official.

Nowhere is the "balancing" role of the school superintendent more evident than in his budget function. Here, he must be aware of the needs and pressures existing in his school system, including those from all of the other six classes of participants in the budget process. For example, he must attempt to construct his recommendations in such a way that civil rights groups, teachers' organizations, and taxpayers' associations all will accept them, even when they are not elated over the final budget.

Superintendents vary in two important ways with respect to the strategies they follow in presenting a budget to a board of education. First, they vary in the extent to which they press for higher educational expenditures; some superintendents pride themselves on "moving" a school system toward increased services for children and higher levels of teacher pay, while others place greater priority on frugality and efficiency in operation. Apart from these abstractions, however, superintendents (if they are to last long in their position) must be realistic about the revenue situation of the board of education, particularly in fiscally independent districts.

Second, superintendents vary both in the amount of information they provide to boards of education with their budget and in the timing of their presentation. In one large city, the superintendent did not discuss budget matters specifically with the board prior to the time he formally presented his published budget to them. The board promptly held a public hearing and an executive session on the budget. As a result, the board made only minor changes in the superintendent's budget. Yet it is difficult to stereotype the situation even in a given city, because in the situation just cited, the superintendent in the succeeding year increased substantially his communication with the board about budget matters during the budget preparation stage. As a consequence, during the second year, the board prepared a priority list of programs it wished to implement and used these priorities in evaluating the superintendent's formal budget recommendations.

The range in the amount of information provided by superintendents is extraordinary. In most cities the budget and supporting documents form an imposing pile of materials. In a few cities, though, important budget recommendations from the superintendent are accompanied by little or no detailed supporting data. In one city the superintendent's preliminary budget estimate for the board in a recent year was only two pages long; in another, the board for many years did not receive a detailed expenditures breakdown at any time during the budget process. Of course, these variations are partially a function of what a particular board wants and what it will accept, but on the whole the superintendent himself shapes the format of his budget presentation to the board of education.

Of the 14 cities, the greatest flow of information from the administrative staff to the board was observed in Los Angeles. There the board receives with the superintendent's budget a packet of 30 or 40 memoranda, showing revenue and expenditure trends over a period of years, with projections of these trends into future years. Detailed trends are shown for such areas as textbooks, teachers' salaries, revenues, and ADA. The Los Angeles Board, and particularly its Budget and Finance Committee, analyze these materials thoroughly in a solid week of all-day public meetings before adopting the budget.

In most big cities, it is fair to say that the superintendent provides a substantial amount of supporting information when presenting his budget to the board. Budget specialists may argue over whether this information is presented in the most usable form or not; later we will discuss questions related to the utility of program budgeting as one alternative for increasing the usefulness of budget information to top decision-makers. But when current budget documents are compared to those of a half-century ago, it is evident that budgeting today has become far more responsible and informative.

The Board of Education

A crucial use of power of a big city board of education is exemplified in the development of its annual budget, specifying the amount of tax money to be made available, and establishing rules as to how the money shall be distributed within the system.

To understand the role of big city boards of education in budget determination, it may be useful to review briefly the functions of boards of education in general. The classic view of the local board of education in the literature of school administration is that of policy-maker. The power of local boards of education is derived from state legislatures, which establish them by virtue of the state's plenary power over education. The legislature specifies the forms, powers, duties, and limitations of local boards of education.

It is only realistic to view local boards of education as political bodies, in as much as they are required by law to make policy for the local school system, and to see that policies made by the legislature are enforced. Boards thus represent a direct extension of the plenary power of the state. Some boards have direct access to renewable resources through the power to tax, while others have a state-mandated claim on taxes that are formally levied by the city government. In addition, when boards exercise the rule-making authority delegated to them by the state, their rules have the force of law within the school system.

In practice, however, increasingly detailed rules for schools are being written in state legislatures, thus in effect abrogating the rule-making power of local boards in any area affected, and returning to the legislature the authority once delegated to local boards. In addition, legislatures in many states have created separate bodies of law for regulating different classes of school systems; thus frequently legislatures enact laws applying only to "cities over 500,000 in population," which in most states means one or a few cities. These separate bodies of law for large districts tend to erode rather than increase the powers of their boards, reducing the alternatives for decision available to them. For instance, in 7 of the 14 cities, the fiscal discretion of local boards of education is more restricted than in smaller school districts in the same states.[31]

These laws reflect the suspicion with which rural-dominated state legislatures have historically viewed large cities. They also reflect the corollary view that big cities are better able to finance education than other cities and therefore require less fiscal discretion to meet their needs. Real estate lobbys in big cities have been able to protect their own interests through state restrictions on local taxing authority, thus further contributing to the fiscal difficulties of urban schools. As we noted in Chapter I, it is difficult to reconcile these views with our appraisals of the conditions and needs in our cities today.[32]

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[31] Buffalo, Chicago, Milwaukee, New York City, Philadelphia, Pittsburgh, and St. Louis.

[32] See Chapter I.

Some boards and superintendents in the 14 cities were observed to have close communication with political leaders in the state legislature, but other big city school systems seemed virtually isolated from the centers of political power at the state and sometimes even at the municipal level. Carefully planned and comprehensive attempts by educators to establish close liaison between school officials and partisan political leaders are the exception rather than the rule in cities today.

Lobbying is usually assigned to a member of the superintendent's staff, although in most cities with dual control it traditionally is a responsibility of the business manager. City school districts vary in the degree to which they appear to value lobbying;[33] some maintain a full-time staff in the state capital, while others restrict their attempts to influence the legislature to occasional trips to the capital to testify at hearings. Board members in most cities are not active lobbyists and participate only when critical measures are before the legislature. Superintendents themselves rarely carry the routine tasks of lobbying, but invariably become involved as important legislation is being considered.

Similarly, school staffs and board members typically do not enjoy close or friendly relationships with the local assessor; in some instances, these relationships are hostile. Few city school administrators and board members perceive themselves as part of the same political world as assessors and city councilmen. The general view of educators appears to be that they would rather be isolated than risk municipal control. It is by no means certain that the choices are in fact dichotomized. In one city, an exception to the general practice, the superintendent and board members are cultivating closer informal relationships with city and state political leaders, so that the schools can be better "represented" in the chambers of city and state government; neither the educators nor the politicians view these new relationships as leading to municipal control of this fiscally independent school district.

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[33] Excellent analyses of school-state relationships are found in: N. A. Masters, R. H. Salisbury, and T. H. Eliot, State Politics and the Public Schools (New York: Alfred A. Knopf, 1964) and in Stephen K. Bailey, *et al.*, Schoolmen in Politics, The Economics and Politics of Public Education (Syracuse: Syracuse University Press, 1962).

If the contention is correct that legislatures are increasing their body of policy for schools, then we should expect to see boards of education increasingly engaged in mediating the terms under which state or national policy is applied in the local system, and less involved with the formulation of policy in the traditional sense.

The control of big city boards of education by partisan political leaders has been observed at times in the past, but this phenomenon is far less frequently observed today. The traditional separation of schools and partisan politics, while not as uniformly upheld in cities as elsewhere, has been maintained in many cities. Thus, persons elected or appointed to boards of education in big cities today have rarely occupied other political office. Board positions are not typically regarded as a political steppingstone, and ex-board members usually do not run for other political offices. In some cities, particularly where boards are appointive, the role of school board member is one of the last remaining opportunities for "gentlemen in public office." In many of the very large school systems, periods of relative peace and quiet in the management of the district's affairs have in the past been characterized by high incidence of "gentlemen" on the board, who frequently prefer to avoid controversy rather than to extend it. Therefore, some of the most consequential educational issues of our time, because they have been the most violently controversial, have often been sidestepped by big city boards of education, rather than being met "head on," and so have had to be resolved in the less squeamish but more realistic arenas of partisan politics. Public concern about school policies, particularly in the area of civil rights, is so serious today that it may no longer be possible for boards to do anything but face these concerns squarely. (Indeed, as we shall see, raising a controversial issue is one way to put pressure on the board.)

The Board and the Budget

As school districts become larger and more complicated, budget-making also becomes more complex, requiring extensive study of a wide-range of information, usually much more information than can ever be examined during a few meetings of a board of education. Throughout the budget preparation process, expert attention must be brought to bear on the budget, and the time and expertise required for budget preparation is within the school bureaucracy. Consequently, a substantial part of the control of the budget process passes into the hands of the bureaucracy itself, simply because of the size and complexity of the system's operations.

The power of the school bureaucracy during the budget preparation stage, substantial though it is, is countered in some large cities by unions, taxpayers' groups, and others who develop their own professional research staffs to present their point of view at budget hearings. In most cities, economy-oriented taxpayer associations are active during the school budget process, thus sustaining the influence held by many private "municipal research bureaus" for decades. Of course, voluntary associations demanding additional services will also attempt to influence the board, but in many cities these associations are not as influential as taxpayer associations or teachers' organizations.

The influence of economy-oriented taxpayers is substantial in some cases. For example, in one city the Chamber of Commerce represents the interests of the business community in keeping school budgets "in line." The Chamber leads a publicity campaign each time a tax election is held. It has supported the proposed school levy in all but two of the tax elections during the past several decades. However, in return for this support, the Chamber reserves the right to approve or disapprove the proposed levy before it is made public. It claims this right because Chamber members pay about 70 percent of the city's real estate taxes. Reportedly, Chamber of Commerce staff members confer with individual members of the school board, discussing the proposed levy. The board members generally face reality and hesitate to exceed the figure that the Chamber will support. In the two elections in which the Chamber of Commerce did not support the proposed school tax levy, the proposed levy was defeated. The Chamber of Commerce in this city views itself as a mediator of demands by some businessmen for low taxes and demands by school officials for increased expenditures.

Of course, not all members of the school clientele support higher expenditures and not all economy-oriented groups necessarily favor lower expenditures. In metropolitan areas, increasing attention is being given to the importance of education for economic activity. In one city, leaders of the Junior Chamber of Commerce in 1964 organized a group supporting the school budget increases proposed by the superintendent. This can be seen as part of the larger realization on the part of economists, educators, and national political leaders that education is an investment paying high and predictable dividends to the economy. In some cities employees and industrial promotion groups are offering increased support, or less vocal opposition, to increases in school budgets. Pressures on boards of education from business groups are thus divided between on the one hand those who favor reduced taxes, viewing educational expenditures as short-term demands from the public sector that are to be resisted, and on the other hand those who are willing to accept and even support higher educational expenditures as investments necessary for the long-term economic health of the community. But the primary orientation of most business and industry groups in large cities today is still skeptical toward increases in school expenditures.

The result of all this is that the principal function of a big city board in the budget process is to balance the conflicting pressures placed upon it. We have noted three kinds of pressures which appear to dominate the budget process. One is generated by the clientele of the school, the parents seeking improvement and extension of educational services. Their pressure tends to increase expenditures. The second kind of pressure is generated by the personnel of the school seeking to improve the conditions of work and staff benefits. This pressure also tends to increase expenditures, but it should be noted once again that increases in staff benefits do not necessarily increase the services to the clientele of the school. The third variety of pressure, which tends to reduce expenditures or minimize necessary increases, is generated by those citizens most interested in minimizing or at least stabilizing their tax load. A distinction should be made between groups primarily interested in efficiency and not necessarily opposed to budget increases (e.g., The Citizens Union in New York City), and groups definitely working to reduce budgets or at least minimize any required increases.

Face-to-face communication between these three major reference groups and the board of education becomes more and more difficult as the size of local systems increases. Associations begin to take over the task of expressing demands of special interest groups, and in some cities, the communication between the governing board and one or more of these three major reference groups periodically breaks down.

These three major reference groups have two avenues available to them for influencing the budget determination of boards of education. One is through direct pressure during the budget process itself, in the form of public statements, news releases, support or lack of it during tax election campaigns, appearances at public hearings, and strike threats. Of the three reference groups, personnel groups alone seem able to insert their demands into the budget during its early preparation stage.

School employees and citizens also can influence the budget determination of a board by affecting the selection of the board's members. Where the board is elected by popular vote, or where the tax levy must be approved by voters, all associational groups can seek to accomplish their purposes by increasing the votes favorable to their purposes. Where the board is appointed, these groups may attempt to influence the appointment itself. In New York, presidents of prominent voluntary associations and universities serve on a screening panel which provides a list of potential board members to the Mayor. The Mayor is required by law to appoint only from this list (although a bill has recently passed one house of the New York State Legislature revoking the mandatory provision). In Chicago, where a panel is also used to present names to the Mayor, the Mayor is not legally required to restrict his appointments to the list submitted by the screening panel, but the custom has been continued through several municipal administrations.

A possible alternative strategy for influencing school policy is by deliberately creating controversy; as noted above, boards of education generally seem disposed to move toward reducing controversy. Civil rights groups have employed this strategy with success in many cities, although not in all; in at least two cities, civil rights pressures have not yet had observable direct influence on the total budget. Other associations may move through state-wide organizations for legislation to require a local board to render a particular service or stay within a particular tax limit. The taxpayers' group can work through political channels to reduce the exposure of their property to taxation through underassessment.[34] The personnel group can organize and bargain with boards and legislatures with the ultimate threat implicit in this bargaining that they will withhold their services. If greatly aggrieved, citizens may withdraw from the field by moving to another district, or they may support schools in the private sector.

The typical board of education, in determining its budget, finds itself hemmed in by a growing body of state regulations, levy limitations, state-mandated services, salary schedules, tenure provisions, and other staff benefits, which place a large part of expenditures beyond their control. In the vortex of these pressures a board of education may become immobilized, and this tendency may be more difficult to resist as systems grow and age. Thus, the typical big city board of education attempts only relatively minor adjustments in the school budget during the brief time it considers it.

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[34] For other comments on assessment practices see Chapters I and IV.

MUNICIPAL OFFICIALS AND SCHOOL BUDGETS

Municipal officials play no part in the formal school budget process in 4[35] of the 14 cities whose budget process we examined. In each of these 4 cities, the school board is elected. In each of the other 10 cities, city officials are actively involved in some way in the school budget process.

The literature of school finance and school administration traditionally treats relationships between schools and cities in terms of a dichotomy: school districts are either fiscally dependent or fiscally independent. Educational folklore insists that fiscal dependence holds expenditures down and places control of school policy in the hands of partisan political officials instead of professional educators and "disinterested" members of the board of education. Since fiscal dependence is observed more often in large cities than in suburbs or smaller towns, the issue is relevant to discussions of financial problems in urban schools.

As long ago as 1938, Henry and Kerwin noted "that the terms dependent and independent as applied to city school systems denote varying degrees of subordination of school authorities to civil authorities."[36]

The difficulties that they encountered in 1938 in classifying districts as independent or dependent have not vanished. The set of variables related to fiscal independence and dependence is extremely complex, and involves interlocking systems of federal, state, local, and school district governments, with their accretions of constitutional, charter, and contractual relationships. The phenomena are further complicated by laws, court decisions, written and unwritten policy statements, rules, regulations, and administrative decisions at all levels, as well as patterns of custom and informal organization about much of which no written record exists. As we examine the arrangements in the 14 cities, we will see how ambiguous the classifications are.

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[35] Cleveland, Houston, Los Angeles, and St. Louis.

[36] Nelson W. Henry and Jerome G. Kerwin, Schools and City Government (Chicago: University of Chicago Press, 1938), p. 51.

We noted that city government participates in budget determination in 10 of the 14 cities. In New York City, Buffalo, and Baltimore, mayors and city councils have the final authority for determining the total amount of money the schools will receive. In each of these three cities, the mayor is the dominant decision-maker; the city councils do not exercise great influence over school expenditures. The mayor makes the critical decision about how much money the schools will receive, and his decision, frequently shaped by a powerful budget director on the mayor's staff, is rarely changed by the city council, except when very small amounts of money are involved.

Chicago is an excellent example of a city difficult to classify simply as independent or dependent. The school board's final budget is forwarded to the city council, but the city council may not change it; it must set a property tax rate sufficient to yield the needed school revenues. However, this tax rate must not exceed the maximum rate established by the state legislature. The Chicago schools have levied within a very few mills of the maximum permissible property tax rate for a number of years. In fact, therefore, the state legislature determined the property tax levies for schools in Chicago.

Like Chicago, Milwaukee has a city council that must approve the school board's budget, but may not reduce it in any way. The Common Council must levy a tax sufficient to fund the budget requested by the school board. Milwaukee differs from Chicago, however, in two ways: first, the legislature has authorized a scheduled escalation in the maximum property tax levy for school purposes in the city of Milwaukee; and second, Milwaukee's school board is elected, not appointed.

Philadelphia and Pittsburgh are two other examples of school districts whose property tax levies have been subject to maximums imposed by the state legislature.[37] In these cases, the school district was for many years levying the maximum tax permitted by the state legislature. Recently, the legislature authorized the city councils in Pittsburgh and Philadelphia to increase the property tax levy for schools, but for many years, the city school districts were fiscally "dependent" on the state legislature.

Detroit is another example of a school district whose dependence on the city government is atypical. Detroit obtains local property tax revenues from two types of levies. The first is from a levy determined by the Wayne County Tax Allocation Board, which annually divides a constitutional limitation of 15 mills between the Detroit City School District, the county library system, and the general county government. For years, the Detroit schools' share of this levy has been 8.32 mills, but the Tax Allocation Board has the power to raise or lower the schools' share at any time. The second portion of the schools' local property tax revenues is obtained from levies (over and above the county 15 mill levy) approved by the voters at a tax referendum.

Boston alone among the 14 cities has an elected School Committee but a dependent fiscal structure. The School Committee submits the school budget to the Mayor of Boston, whose decision regarding the maximum allocation for education is virtually final.

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[37] The Pennsylvania state legislature has recently given the city councils of Philadelphia and Pittsburgh the authority to increase the school property tax levy.

San Francisco is still another interesting example of a mixture of independence and dependence. Technically speaking, the school budget cannot be reduced by city officials, and the Board of Supervisors is required by law to levy a tax sufficient to obtain the revenues needed for the Board of Education's budget. However, informal communication with regard to the budget does exist between the city and the schools. It would not be accurate to state that city officials are uninterested in the school budget; and although they have no authority to reduce it, the climate of official opinion with regard to taxes may be one factor considered by the Board of Education as it prepares and approves the school budget. The selection of Board members in San Francisco is also different from any other city in this group; the Mayor nominates individuals, but these nominations are subject to ratification by the voters.

We can see from this variety of governmental arrangements how difficult it is to dichotomize all such relationships simply as fiscal independence or dependence. The real world is more complex. The term "fiscal dependence" is not accurate as a description of a specific set of governmental arrangements. Nevertheless, the great debate over this misleading dichotomy persists.

Advocates of fiscal independence for boards of education have argued that it would tend to solve school revenue problems by removing the school budget from the control of partisan politicians, such as a mayor. We have noted earlier that superintendents and boards of education in fiscally dependent school districts tend to be liberal in requesting budget increases from a mayor who must determine the political feasibility of the requested budget increases, and we have also noted that superintendents and boards of education in fiscally independent districts tend to be more conservative in requesting budget increases when they themselves must test the budget increases against the criterion of political acceptability.

But there is even stronger evidence available than these impressions that increased school expenditures (as contrasted with requests) do not accrue automatically either to fiscally independent or to fiscally dependent school districts. To analyze this question more rigorously, we measured the issue of fiscal dependence on the basis of whether a local government agency other than the board of education actually had the authority to reduce the school budget; authority merely to approve the budget without reducing it was not sufficient grounds for classifying a district as fiscally dependent. This definition was used in the statistical analysis of governmental arrangements in 107 school districts for 1959-60 (reported in Chapter IV). The zero-order correlation coefficient of .11 between fiscal dependence and school expenditures was not statistically significant. Evans used the same definition in a study of 88 districts with between 12,000 and 24,000 ADA and obtained a partial correlation coefficient of -.07 between fiscal dependence and school expenditures.[38] Further, Potter found that in 1950 the partial correlation coefficient between fiscal dependence and school expenditures in 85 of the largest school districts was .02.[39] In each of these studies, socio-economic factors associated with the ability to support education and the demand for educational services were held constant.

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[38] David N. Evans, "Correlates of Educational Expenditures in Medium Sized School Districts" (Ed.D. dissertation in progress, School of Education, Stanford University).

[39] Conrad H. Potter, "Educational Expenditures in Large City School Districts, 1950-1960" (Ed.D. dissertation in progress, School of Education, Stanford University).

Nor must reliance be placed merely upon these three studies. The Ten-State Study, which again held socio-economic factors constant, found no consistent differences in fiscally independent and dependent districts. In New York and Wisconsin, fiscally independent districts spent more per pupil than dependent districts, but the reverse was found in New Jersey and Massachusetts, where the dependent districts spent more.[40] The only major study in recent years to show a positive relationship between fiscal independence and higher per pupil expenditures was Minar's monograph in the excellent Syracuse University series on "The Economics and Politics of Public Education."[41] A slight relationship between fiscal dependence and higher expenditures was found by Woodward, who analyzed school expenditures in 85 cities between 1929 and 1944.[42] Margolis also cites evidence that higher expenditures are found in fiscally dependent districts, and argues that budget constraints are eased when the school is allied with the professional politician.[43]

Overall, however, the literature of public finance and school finance shows no consistent relationship between fiscal independence and per pupil expenditures. Thus, the traditional argument that fiscal independence is associated with higher per pupil expenditures has little real support.

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[40] H. Thomas James, _et al_., _Wealth, Expenditures and Decision-Making for Education_.

[41] Jerry Miner, _Social and Economic Factors in Spending for Public Education_, The Economics and Politics of Public Education, No. 11 (Syracuse: Syracuse University Press, 1963), p. 159.

[42] Henry B. Woodward, "The Effects of Fiscal Control on Current School Expenditures" (Ph.D. dissertation, Columbia University, 1948), cited in _Public Finances: Needs, Sources and Utilization_, A Report of the National Bureau of Economic Research (Princeton: Princeton University Press, 1961), p. 263.

[43] Julius Margolis, "Metropolitan Finance Problems: Territories, Functions, and Growth," _Public Finances: Needs, Sources and Utilization_, A Report of the National Bureau of Economic Research (Princeton: Princeton University Press, 1961), pp. 229-93.

CONCEPTUAL APPROACHES TO BUDGETING

Budget theorists and practitioners are divided in their views about the best approaches to budget making. One group advocates a political approach to developing budgets and the other group expresses preference for an approach based on economic analysis.

The central characteristic of the politically developed budget is its incremental nature.[44] The input to this year's budget process is last year's budget. Once a base is established, it is ritualistically continued year after year, seldom challenged. Consequently, active consideration of current budget proposals is narrowed to an analysis of new items, such as the addition of employees in a department, or the addition of new programs; the budgetary battle thus is usually fought over less than 10 percent of current expenditures. Attention is focused on a narrow range of increases or decreases. A budget is almost never reviewed as a whole every year in the sense of reconsidering the value of all existing programs. The budget preparation stage and the budget process as a whole both are incremental rather than comprehensive.

Economists, however, prefer a measurements approach to budget making.[45] They want to measure outcomes in terms of costs and to use these comparisons as a basis for decision-making. The economist does not discount the importance of value judgments relied upon so extensively in the political budget model; rather, he says, value judgments can be made more rational through knowledge about the costs and benefits of government programs. Advocates of the measurements, or economic analysis, approach to budgeting favor the program type of budget over the traditional line-item type.

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[44] Aaron Wildavsky, The Politics of the Budgetary Process (Boston: Little, Brown and Company, 1964), Chap. 2.

[45] Jesse Burkhead, "The Budget and Democratic Government," p. 93.

As we noted above, a program budget is organized in terms of combinations of activities that produce designated end-products, rather than on a line-item, "object" basis.[46] Each program is associated with a broad organizational goal, and cuts across departmental lines.

Each program in the budget is subdivided into program elements, which are specific statements of the expected output of goods or services. Objectives are set for each program, preferably in quantifiable terms. These objectives consist of the planned output for individual program elements. The program elements are costed in terms of research and developmental expenses, capital outlay, and annual operating expenses, with multi-year projections of each cost factor. The costs are continually analyzed in relation to the measurable benefits produced by the program elements.

The result is an attempt to link goal-oriented operations plans with budget classifications, something that finance textbooks have talked about for years but that budget practitioners generally have failed to accomplish.

Burkhead suggests that we are not faced with an either-or choice between traditional budgeting and program budgeting.[47] Budgeting is and must remain a political process. It reflects the feelings of persons and interest groups in terms of demands for services and sensitivity to their costs. On the other hand, it should be possible to add some economic calculations here and there that will help to guide the next incremental budget decision.

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[46] Bureau of the Budget, Bulletin No. 66-3.

[47] Burkhead, "The Budget and Democratic Government," p. 98.

Which of these two models is the more accurate representation of the events during school budget processes in the 14 cities? Little evidence was found that city school systems have yet begun to implement program budgeting in any widespread way. A number of cities are planning to move toward a program budget, and some have already begun the job.[48] The difficulties in implementing program budgeting in public schools center principally on the fact that it is difficult to disaggregate quantitatively the "end-use product" of the teacher. This end-use product presumably has something to do with the learning, the growth, the maturation, and the success in later life of the teacher's students, but the state of the art in the social and behavioral sciences does not yet permit this kind of measurement. Meanwhile, attempts to implement program budgeting will probably rely on categories of services rendered (e.g., after-school reading) rather than actual end-products.

The strongest impetus toward implementing program budgeting comes from the federal government. It is anticipated that as problems connected with program budgeting are at least partially resolved within the federal bureaucracy, state and local governmental jurisdictions will move toward structuring their budgets along program lines. The Elementary and Secondary Education Act of 1965 places specific requirements upon local districts to evaluate educational programs for disadvantaged children under Title I; the federal government is requiring that these evaluations be done on a cost-benefit basis, and cost-benefit analyses require the same kinds of information as program budgets. It is likely that the use of program budgeting will slowly increase in large city school systems during the coming decade.

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[48] Chicago is notable for the progress it has made in restructuring many of its accounts along program lines.

Most budget decisions in big city school systems are made "at the margin." That is, the basic structure of budget decisions in big city school systems assumes that existing activities and programs will continue; the budget analysis is thus focused upon proposed increments in, or additions to, existing activities and programs. It is true that in a few cities the decisions made at the margin are made on a program basis (e.g., a board deciding to institute a one-year preschool program for all children). Nevertheless, the basic assumption of most big city school budget processes is that existing programs and activities will not be critically reviewed annually or periodically, but will be assumed to continue. When this assumption is made, the basic structure of the budget decision becomes incremental, and the attention of budget decision-makers is focused upon proposed additions to the program, rather than to the basic program itself.

CONCLUSIONS

At the beginning of this chapter, we asked if any generalizations could be made about big city school budget processes. The following generalizations are based upon our observations of the budget processes over a two-year period in 14 large city school districts.

1. The budget process in large city school districts is far more complex than has heretofore been reported in traditional school finance literature. Textbook treatments of the budget have been oriented primarily toward smaller administrative units, where political realities may be different than in a large city.

2. When school budget documents of today are compared with those of a half-century ago, it is evident that budgeting today is far more responsible and informative.

3. The financial resources of a community and the character of its population set "boundaries" beyond which it is unlikely that educational administrators and school boards can move, regardless of governmental arrangements. These boundaries are of three major types: legal; customary or historical; and socio-economic. Thus, decision-making about school budgets must be viewed in the context of a number of de facto limitations on the decision-makers' discretion. State restrictions on the fiscal leeway of city school districts are more stringent in 7 of the 14 cities than for smaller districts in the same states.

4. The basic structure of the budget decision in big city school systems is to assume that existing programs will continue and to focus budget analysis upon proposed changes in, or additions to, the existing program. This incremental approach is being challenged by the idea of program budgeting, which is being adopted throughout the federal government by order of the President. It is anticipated that the use of program budgeting will slowly but steadily increase in big city school systems in the coming decade.

5. To simplify the decision-making required by annual budget processes, cities utilize formulas to determine how much will be required for particular budget categories and as a detailed plan for the distribution of funds. These formulas, or norms, are based upon the enrollment in a school, the number of teachers in a school, or a similar quantitative index, and are used to determine budget allocations with respect to

certificated and non-certificated personnel, supplies, and maintenance. The use of formulas encourages highly centralized budget making and effectively neutralizes thousands of professional employees from participation in the budget process.

6. The influence of teachers' organizations on school expenditures is increasing, but dominates the budget process in very few cities. For every city in which a teachers' union plays a major role in the budget process, we found two cities in which the teachers' union influenced budget decisions no more than community voluntary organizations and other employee groups.

7. Demands for teachers' salaries and other staff benefits are usually presented to the superintendent of schools or his budget director at an early date in the budget process so that changes in teachers' salaries can be considered in the earliest stages of the budget preparation. By contrast, there is no similar channel open for formal communication during the preparation stage of a budget process for community organizations who may wish to urge that additional educational services be provided.

8. The popular dichotomy of fiscal independence versus dependence bears no relationship to the level of educational expenditures, and is not adequate to describe the complex governmental arrangements involved in large school districts' budget processes. The structure of governmental arrangements should not be the issue; their form has little consequence for school expenditures. If the public is apathetic or the schools are not

responsive to articulate citizens, no form of democratic government is likely to serve the people well over an extended period of time.

9. As big city school budget processes have become more complex, the ability of the school bureaucracy to exercise substantial influence over budget decisions has increased, since the school bureaucracy provides the expertise and time necessary to collect, organize, and analyze the vast amount of information needed in the preparation of a budget.

10. In many big city school budget processes, the major decision-makers are aware at a very early stage in the budget process of the approximate amount of money that will be available for the schools during the following fiscal year. Thus, most budget processes are conducted under an umbrella of "known revenues." Much of the detailed procedures involved in filling out forms, passing forms up the administrative ladder, analyzing information, holding public hearings, etc., are little more than ritual and have little bearing upon the decision about the total amount of money the schools will receive. Even decisions related to the distribution of available revenues within the system are largely determined through the widespread use of universalistic formulas or norms.

11. Three major reference groups put pressure on boards of education during budget processes: the clientele of the school and school employees, both supporting higher expenditures but for different purposes; and economy or efficiency groups who resist increases in the level of expenditures. The principle

function of big city boards of education during the budget process, then, is to balance these conflicting pressures placed upon it. Hemmed in by a growing body of state regulations, state-mandated services and levy limitations, salary schedules, and other staff benefits, the typical board of education may become partially immobilized, and thus attempt only relatively minor adjustments in the school budget during the brief time it is before the board.

To close on a literary and somewhat editorial note, in most cities the shoe has been too small for the foot for many years. It is not surprising to find that the owner of the foot, perhaps unconsciously, has stopped wanting a new pair of shoes that fit properly, and instead has learned to live with cramped feet and a good shoe horn. The possibility that substantial federal funds might redress the situation seems less likely in 1966 than in 1965. There is no evidence in hand that the "out-of-balance accounts" discussed in Chapter I will be brought into balance in the near future. The prognosis will remain pessimistic until social policy for education in our cities is determined on grounds other than the availability of resources under tax structures designed decades ago.

CHAPTER IV

THE STATISTICAL ANALYSIS

This study has had four major parts. Three of them have been discussed in preceding chapters. The fourth part, a statistical study, will be presented in detail in this chapter.

THE SAMPLE

For statistical purposes it was necessary to choose a larger sample than that of the 14 largest city school systems in the United States to increase the power of our statistical procedures. We therefore selected the sample of 107 school districts with over 25,000 enrollment in 1960, out of a total of 119 listed in the publication, Current Expenditures Per Pupil in Large School Systems, 1959-60,[1] published by the U. S. Office of Education. We eliminated 12 districts of the 119 for the following reasons:

1. Jersey City, New Jersey, and Corpus Christi, Texas, were eliminated because we were unable to obtain information on their exact district boundaries.

2. Washington, D.C., and Hawaii were eliminated as being atypical. Washington, D.C., has a unique governmental structure, and thus was excluded from our

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[1] Gerald Kahn, Current Expenditures Per Pupil in Large School Systems, 1959-60, U. S. Department of Health, Education, and Welfare Circular No. 677 (Washington, D.C.: U. S. Government Printing Office, 1962).

analysis. Hawaii, because it is a single state system, has no local sources of funds, and local politics would not play the part that they do in other school districts.

3. We anticipated that it would be necessary to field check certain items of information which were to be used in the statistical analysis, and that where these involved political data it would be necessary to assume that conditions which had existed in 1960 still existed at the time of our investigation (1964-65). Where it was known that a major change in school district organization had occurred since 1960, the district was dropped from the sample. The districts dropped include Pasadena, Richmond, and San Bernardino school districts, all in California, none of which in 1960 offered a kindergarten through 12th grade program. In these three areas there was typically a large high school district covering a large territory, and a number of smaller elementary school districts covering territory not necessarily coterminous with that of the high school district. The Evansville, Indiana, city schools have consolidated since 1960 with four other smaller districts. In North Carolina, the Mecklenburg County School District has consolidated with the Charlotte School District since 1960. In Tennessee, Davidson County and Nashville school districts have amalgamated with the metropolitan government, and the Knox County School District has amalgamated with the Knoxville City School District.

Los Angeles is one exception to this particular rule for deleting school districts. In 1960, Los Angeles was a high school district encompassing within its borders the Los Angeles

Elementary School District and a number of much smaller elementary school districts. The Los Angeles High School District and the Los Angeles Elementary School District, although they did not occupy exactly the same boundaries, were governed by a single board and a single administration. While it is recognized that this district violates our rule, we felt it very desirable to include it because of the fact that it is one of the 14 members of the Research Council of the Great Cities Program for School Improvement in which our field work was being conducted. The fact that the elementary school district occupied a major portion of the high school district, and that the board and administration were common to both, made Los Angeles amenable to inclusion for purposes of gathering the census data for this report. The boundaries of the Los Angeles High School District in 1960 were used.

COTERMINALITY OF CENSUS DATA

One of the major problems faced by this study, and by many other studies of school districts that hope to use census data, is that school districts frequently have boundaries which are not coterminous with the boundaries of any other political subdivision. Other investigators have wrestled with this problem, and most have found it expedient to ignore it, and to use the census data for the largest population center in the district. While attempts to determine whether or not the census data for the largest population center in the district are really representative of the district itself may have been made, we found no record of them. This study has made a determined attempt to find some of the answers to this problem.

Our approach was to determine, for each of the 107 districts in the sample, whether or not it was coterminous with some other political subdivision. This was done by questionnaire to the school district. Where the district was not clearly coterminous with some other political subdivision, we obtained a detailed map of the district's boundaries. Where the district was coterminous with the boundaries of a city, of a county, or of the balance of a county less one or more of the cities within it, summaries of census data were available in the form desired for the statistical analysis. Where the district was not coterminous, maps of census tracts taken from the census documents were drawn onto the map of the school district. Even the census tracts frequently were not completely coterminous with the school district, but because the census tracts are small it was possible to keep the error to a very small percentage of the total population in the district. By inspection it was then possible to determine which of the census tracts should be included in the district and which not. Where the district boundaries split a census tract, the tract was entirely included if more than 50 percent of the population of the tract was within the district, and otherwise was entirely excluded. Where city block data were available, they were used in making this determination. Where city block data were not available, a judgment was made on the basis of the area involved and the density of street pattern inside and outside the district. Although this method of getting "coterminous" census data is not completely accurate, it does provide data on the population which are identical with that of the school district to within plus or minus 2 percent, usually much less than that.

Once it was determined which census tracts were to be included, the detailed data for each census variable to be used in the statistical analysis were obtained for each census tract. These were totaled for the entire district and, where applicable, the appropriate medians and percentages were calculated.

Of the 107 districts in our sample, 32 were clearly not coterminous with the boundaries of any other political subdivision. In addition to these, another dozen had very minor differences between their boundaries and those of some political subdivision. Where the differences in population were less than plus or minus 2 percent, the districts were classified as coterminous with the political subdivision. The most complicated district was Los Angeles, which included census districts from all or a portion of the cities of Los Angeles, Carson, East Los Angeles, Florence-Graham, Gardena, Hawthorne, Huntington Park, South Gate, and West Hollywood, and in addition, 36 tracts in Los Angeles County.

In the manner described, data were gathered on the following proxies for the ability and demand[2] parameters: median family income, percentage of housing occupied by owner, median years of schooling of the adult population, percentage of labor force unemployed, percentage of population non-white, percentage of elementary students in private school, and total population. For the non-coterminous districts data on these same variables were also gathered for the population center, city or county, that seemed most representative of the district. When the multiple regressions to be discussed below were run on these 32 districts, one regression used the laboriously gathered data for the district; the other regression used data for the population center thought to be most representative of the district. Neither the multiple correlation coefficient nor any of the individual regression coefficients were significantly different in the two regressions. With regard to these 32 large city school districts, at least, an assumption of coterminality does not seem significantly to affect the variables being used in this study.

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[2] The terms "demand" and "expectations" are used interchangeably in this chapter.

FULL PROPERTY VALUE

Property value has always played a prominent part in theoretical and practical discussions of school district financing. A large majority of the school districts in the United States use taxes on value of property as their principal source of revenue. The base of these taxes is usually the assessed value, which may or may not be adjusted by some "equalizing" authority. Large differences in the ratio of assessed value to "true" or "full" value in different districts has made it appear important in any theoretical discussion of school finance to focus attention on the full value of the property on which taxes are based.

The problems involved in determining true property value are many and varied. They have led some experienced observers to propose the abandonment of property value as a base for taxes. A dollar bill has a definite value, set by the government. A share of stock can be said to have a definite value as of a certain date if, on that date, it was traded in volume on the open market. Scarcely any other property has such an uncontested value, and yet cash and securities are almost uniformly excluded from property assessment because of the difficulty of discovery.

Almost all property subject to taxes has a much less determinable value. The value of a single-family residence on a parcel of land in a subdivision can often be assessed fairly accurately. There are enough sales during any one year to give a good picture of the value attached to this type of property by the buyer and seller. In spite of this, large differences in assessment ratios exist, both between districts and for individual parcels within a district. By comparing sale prices on single-family residences with the assessed value of the property immediately prior to the sale, a good idea of the assessment ratio for this particular type of property may be obtained.

Unfortunately, the problem is not so simple with other types of real property. An industrial plant, a commercial property, or a farm does not sell often enough to get an adequate comparison of sale price and assessed value. When it does sell, it may be part of a complicated deal that masks the true selling price. And even if an accurate determination could be made, it is not generalizable, for no two properties of this type are sufficiently alike to permit generalization. This means that the assessor must set a value on the property that depends on a number of subjective judgments regarding the location of the property as a place of business, the earning power of the business, the depreciated costs of the physical facilities, and other factors. Two competent appraisers will often differ markedly in their appraisal of the value of a business property. It would be surprising if the assessment ratios for business property (if they could somehow be accurately determined) showed any consistency.

A third type of problem is concerned with the assessment of personal property (in general, that property not attached somehow to the land). This includes business inventories, and it is a well-known fact that inventories are always low at assessment time. As a result, assessment of personal property is erratic at best. In many jurisdictions, some or all personal property is exempt from taxation for this reason.

Another problem with respect to assessment ratios is the fact that in many states aid is given to school districts and other local governmental entities on an "equalization" basis, with entities having a low assessed value per capita receiving more aid per capita from the state. This has encouraged assessors to lower assessments competitively in order to bring in more state money.

The lack of objectivity involved in assessing property value has made assessed values peculiarly subject to manipulation. This is abetted by the fact that assessed values of individual parcels are not often public knowledge in fact, although they may be public by law. Recent cases arising out of assessment scandals in California add weight to the popular hypothesis that large taxpayers sometimes control the amount of their taxes through a private arrangement with the assessor, as well as by trying to convince school boards and city councils to keep tax rates down. True, past scandals in assessment practices have resulted in various kinds of state regulations. Yet because of the subjectivity of assessment, these state regulations can only be effective on a gross basis, and so long as we continue to use property value as a tax base, individual variations in assessment ratios will be great.

Important as the concept of full property value is, taxes are based on assessed value. One of the things we did in this study was to test the separate effects of these two concepts.[3]

As indicated above, assessed value per ADA is easy to obtain. Both assessed value and ADA are usually a matter of public record. It is the assessment ratio that is a problem. We took two approaches to it. The first approach was to ask State Tax Commissions for estimates of the ratios. Where they were unable to furnish these, we asked the school district's administration to supply an estimate. The second approach was to use the figures given in the Census of Governments, 1962.[4] Each approach has serious drawbacks.

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[3] See below, pp. 108, 115, and 116.

The first approach tends to be very subjective. Often the respondent indicated that the ratio given us was, frankly, a guess. In a number of states there is a legal requirement for state determination of assessment ratios. Even so, these are based either on a comparison of residential sales and assessed values (which is objective but limited in scope), or upon the full values assigned by a state-employed appraiser (which is as subjective as the original determination). In addition, these state-determined ratios are as subject to political manipulation at the state level as are the assessed values locally. As an example, in one state where the U. S. census lists average assessment ratios of 25 to 30 percent, an elaborate state study finds the lowest county with an assessment ratio of 50.1 percent. The legal purpose of the state study is to see that the county assessors keep assessment ratios above the state minimum of 50 percent.

The second approach, that of using the U. S. census data, is objective but limited. For the year 1961, in most counties of the United States and in major cities, all sales of single-family, non-farm residences were checked. Sales between relatives, or which for other reasons might not reflect true market value, were excluded. For the remaining sales, the most recent assessed value previous to the sale was obtained. From these figures an assessment ratio was obtained and also a standard error. These determinations have the advantage of being objective and, in addition, most of the standard errors are low. But the U. S. census makes no attempt to get an assessment ratio on farm land, industrial and commercial real property, and personal property. In addition, the census ratios are not applicable in Texas, where each taxing entity may have its own assessor. The census ratios apply to the value set by the county assessor, and these may be very different from those set by the school district's assessor.

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[4] U. S. Bureau of the Census, Census of Governments, 1962, Vol. II, Taxable Property Values (Washington, D.C.: U. S. Government Printing Office, 1963), Table 22.

A shortcoming of both approaches to determining the assessment ratio is that they are generally calculated on an average for the county (or city). The assessment ratio for a district which occupies part of the county may not be the same as that of the county as a whole, although we were forced to assume that it is. Where a district lay in two or more counties with different assessment ratios, we used a weighted average ratio based on the percentage of district population in each county.

We computed full values using both sets of assessment ratios, for use in exploratory portions of the study. However, in later work where assessment ratio was used as a variable, we had to choose between the two sets of ratios. We decided that for our purposes the ratios published by the U. S. census were more objective and more comparable among states. In all except Texas districts the census figures were used. Ratios supplied by the school districts were used in Texas, since the census figures were inapplicable.

COMMENTS ON OTHER VARIABLES

Only a brief comment is necessary on most of the other variables. From the 1960 U. S. census,[5] we obtained for each district the following information: median family income, percentage of occupied housing occupied by owner, median years of schooling of the adult population (age 25 and above), percentage of labor force unemployed (both male and female), percentage of population non-white, percentage of elementary school children enrolled in private schools, and the total population.

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[5] U. S. Bureau of the Census, Census of Population and Housing, 1960, Census Tracts, Final Report PHC(1)-38 (Washington, D.C.: U. S. Government Printing Office, 1961).

Average daily attendance and current expenditures per ADA were obtained directly from the U. S. Office of Education. When the contract for this study was being negotiated, the Office of Education assumed the responsibility for providing expenditures and attendance data for the cities in our sample. The Office adjusted the data for purposes of comparability among school districts. For this reason, although our list of districts was obtained from a U. S. Office list of districts with over 25,000 ADA, our data tabulation shows some districts with less than 25,000. The smallest is Dearborn, Michigan, with 20,000 ADA.

Data on whether the school board is elected or appointed were obtained from a U. S. Office of Education publication.[6] Three districts have boards that are not clearly one or the other. One has a self-perpetuating board (we classified it as appointed), and two have some members elected and some appointed (we classified the board by the method of selection for the majority).

The remainder of the data was obtained directly from the school district by questionnaire. A complete list of the variables used in these analyses, and the abbreviations for the varables, are given in Table 7 on page 136. Except where noted, all data were for 1960.

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[6] Alpheus White, Local School Boards: Organization and Practices, U. S. Department of Health, Education, and Welfare, Office of Education, Bulletin No. 8 (Washington, D.C.: U. S. Government Printing Office, 1962).

THE STATISTICAL PROCEDURES

The principal method of evaluating the data of this study was that of multiple regression. Since multiple regression is a parametric test, assuming normally distributed populations, the authors we first made histograms of the data for each of the variables in order to determine by inspection whether the data could reasonably be assumed to have come from a normally distributed population. Only total ADA and total population were badly skewed. Since both were measures of the absolute size of the district, it was unnecessary to use both, and we dropped population as a variable. (Its simple correlation with ADA in our sample is .97.) The skewness of ADA was partially circumvented by use of the logarithm of ADA.[7] 36

Some of the variables were dichotomous (as, for example, board is elected/appointed). These are not assumed to be normally distributed, and normal distribution of a dichotomous variable is not required by the regression model. Fortunately, the multiple regression test is quite a robust one, and it can survive rather large deviations from true normality.

the authors We first tested to see how much of the total variance in expenditures per ADA could be explained by approximately the same variables as were used on a wider range of districts in the Ten-State Study. In that study a total of eight variables were used to measure ability and demand in 589 school districts in ten states. A multiple correlation coefficient of .66 was obtained from all districts combined, indicating that 43 percent of the variance in expenditures per ADA had been explained by the variables used. Multiple correlation coefficients for districts in some of the individual states were higher. Use of a dummy variable for the state raised the multiple correlation coefficient to .88, explaining 77 percent of the total variance. Such a dummy variable has little interpretive value. It merely indicates that there is something important connected with the fact that a district is in a particular state. It could be differences in the effect of variables already measured, or it could be the effect of unmeasured variables, such as custom, price level, or governmental arrangements. The hypothesis was made that a major component of the effect was caused by differing governmental arrangements, and a primary purpose of the present study is to test this hypothesis.

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[7] See further discussion of this below, p. 116.

In the present study a multiple regression using approximately these same variables,[8] representing ability and demand factors, gave a multiple correlation coefficient of .84, compared with the coefficient of .66 for these variables in the Ten-State Study. This would seem to indicate that the effect of ability and demand upon expenditures is less in the smaller districts predominating in the Ten-State Study than in the large school districts of this study. An explanatory hypothesis might be that in small districts a single unique factor might distort expenditures more than it would in a large district. The multiple correlation coefficient of .84 indicates that approximately 71 percent of the variance was explained by these variables, which primarily represented ability and demand. This left a maximum of 29 percent of the variance to be explained by governmental arrangements or other factors. When we added all of our measures of governmental arrangements, the multiple correlation coefficient increased to .85, indicating that 73 percent of the variance had been explained. While this multiple correlation coefficient of .85 is slightly lower than .88 obtained with dummy variables representing governmental arrangements in the Ten-State Study, it should be recognized that we have actually measured some governmental arrangements and classified them according to the type of arrangement in the present study. Nevertheless, the amount of variance explained by the measures of governmental arrangements used is clearly disappointing.

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[8] Percentage living on rural farms, a variable in the "Ten-State Study," was not used in this study. Total ADA, used in this study, was not used in the "Ten-State Study."

We also ran three separate regressions on the ability-demand variables alone, in each of which a different measure of property value was used. The results were as follows:

Measure of Property Value Used in Regression	Multiple R	Partial Correlation Coefficient
Full value per ADA, using locally furnished assessment ratios	.839	.138
Full value per ADA, using assessment ratios from U. S. census	.840	.146
Assessed value per ADA	.844	.210

These results indicate that for this sample, at least, assessed value is a somewhat better predictor than full value. As a result of this finding, in later runs we used assessed value and assessment ratio as separate variables, enabling us to separate the effects of the two.[9]

DISCUSSION OF RESULTS FOR SPECIFIC VARIABLES

The variables used in this study were each chosen as presuming to measure one or more of the postulated factors of ability, demand, and governmental arrangements. While ability and demand are separate conceptually, they tend to be correlated with each other, so that variables which measure one tend to some extent also to measure the other. "Governmental arrangements" is not a single factor but a cluster of mediating factors, each of which has some effect upon the basic determiners, ability and demand. The variables we have chosen to measure governmental arrangements are, in general, not highly correlated with ability and demand.

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[9] See pp. 115 and 116 for further evidence of the importance of assessed value.

The first variables to be discussed will be the seven that measure ability and/or demand. Following this will be a discussion of nine variables measuring governmental arrangements. Table 8, located on page 138, should be used in connection with the discussion that follows. Table 8 gives, for each variable, its mean, its standard deviation, and the regression coefficient that should be applied to the value of the variable for a district in making a prediction of expenditures per ADA for that district. Of more interest in the present analysis is the standard regression coefficient. The regression coefficient has been standardized by multiplying it by the ratio of the standard deviation of the variable to the standard deviation of the dependent variable. The standard regression coefficient has maximum values of plus and minus one. For this reason, standard regression coefficients for different variables can be compared directly. Unstandardized regression coefficients cannot be so compared. The standard error of the standard regression coefficient can be used to estimate the likelihood that the coefficient is different from zero. The partial correlation coefficient is also given for each variable. This is the correlation of the variable with the dependent variable, all other variables being held constant. Also given is the zero order correlation coefficient of the variable with the dependent variable, with no other variables taken into account. This table and the ensuing discussion are for all 107 of our large city school districts scattered throughout the United States. The multiple regression equation explains 73.0 percent of the variance in the values of the dependent variable in this sample.

In connection with the ensuing discussion, the reader should also note Figure 3, which gives 95 percent confidence bands for the standard regression coefficients. Where the value zero is not included in the confidence band, we can say with 95 percent confidence that the coefficient is different from zero; that the variable has real explanatory power. Note that all but one of the ability-demand coefficients are significant, while none of the governmental coefficients is.

I. Assessed Valuation per ADA

This variable measures ability to support educational expenditures. It is therefore hypothesized that its regression coefficient will be positive; that as assessed valuation per ADA increases, expenditures per ADA will also increase. As shown by the standard regression coefficient of .200, the hypothesis is supported by this regression. The confidence band in Figure 3 shows that we can be confident that the regression coefficient is different from zero. Note that the zero order correlation coefficient of .430 is considerably higher than the partial correlation coefficient of .209. This indicates that assessed valuation per ADA is highly correlated with expenditures per ADA, but that the other measures used in the regression tend to explain a good deal of this correlation, leaving the remaining partial correlation relatively low.

II. Median Family Income

Conceptually, this variable is one of the most important. It is clearly a measure of ability to support education. But since people with higher incomes want more schooling for their children, it is also a demand variable. This variable illustrates the fact that ability and demand tend to be correlated, as we noted above. The hypothesis is that as median family income increases, expenditures per ADA will increase and thus that the regression coefficient will be positive. The hypothesis is supported, and the standard error of the standard regression coefficient indicates that we can accept this hypothesis with 99 percent confidence.

III. Owner-Occupied Housing

It was hypothesized that this variable would have a negative regression coefficient. We reasoned from the results of the previous study that a person who owns a house receives a tax bill, to which he will react; whereas persons who rent have their taxes hidden as a part of the overall rental price, and consequently may not react to them. The regression coefficient is indeed negative, and the hypothesis is supported with at least 99 percent confidence. We are, however, uneasy about this hypothesis because of our observations of attitudes of home-owners in stable, middle-class, suburban communities toward education. The phenomenon deserves further study.

IV. Median Years of Schooling of the Adult Population

This variable is conceived primarily to be representative of demand for education. It was hypothesized that the higher the median years of schooling of the population of a district, the higher will be expenditures per ADA. The regression coefficient is positive, and therefore the hypothesis is confirmed. The standard error indicates that we may have 95 percent confidence that this regression coefficient is positive.

V. Percentage Unemployed

It was hypothesized that this variable would primarily reflect ability and that the regression coefficient would be negative--that is, a higher rate of unemployment would be associated with lower ability to support education, and therefore with lower expenditures for schools. This hypothesis is not supported. A surprising finding of this study, and one that needs further examination, is that the most important single predictor, in terms of the standard regression coefficient, is percentage of unemployment. Furthermore, the regression coefficient is positive, indicating that the higher the rate of unemployment, the higher the expenditures per ADA. The standard error of the regression coefficient indicates that we may have better than 99 percent confidence in the fact that this is a positive coefficient.

This finding does not emerge in the separate studies done by Potter[10] and Evans.[11] (These studies are discussed in more detail on pages 131 to 134.) In both, the standard regression coefficient for unemployment, while positive, is small and the standard error is large, so that we can have little confidence that unemployment is of value in predicting school expenditures. The fact that it is of such importance in this study indicates a difference in large school districts which deserves further investigation. We have speculated that certain rigidities in the institutional arrangements for education kept the level of services high even after some of these socio-economic indicators had turned downward. The existence of these rigidities in governmental arrangements is pointed out in the discussion of the Potter study later in this chapter.

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[10] Conrad H. Potter, "Educational Expenditures in Large City School Districts, 1950-1960" (Ed.D. dissertation in progress, School of Education, Stanford University).

[11] David N. Evans, "Correlates of Educational Expenditures in Medium Sized School Districts" (Ed.D. dissertation in progress, School of Education, Stanford University).

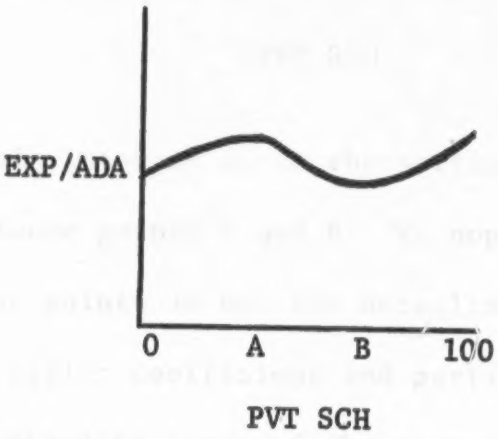
VI. Percentage of Population Non-White

This variable is included more because of the great interest in civil rights and desegregation than because of a strong belief in the direction of its effect. When the various economic factors measured are held constant, it is difficult to postulate a difference in attitude toward schools caused by skin color alone. It is possible, however, that in some districts the existence of segregated schools resulted in expenditures per child appreciably lower than in other schools of the district. The postulated effect in this case would be a negative one; the higher the percentage of non-white, the lower would be expenditures per ADA, even holding economic variables constant. In fact, the effect is negative, but Figure 3 indicates that our confidence in its sign is less than 95 percent. It should be noted that the simple correlation of percentage of non-white with expenditures per ADA is high and negative, as would be expected because of the high negative correlation of percentage of non-white with various economic measures. The sweeping changes in educational policy since 1960 are sure to influence the effects of this variable in future studies.

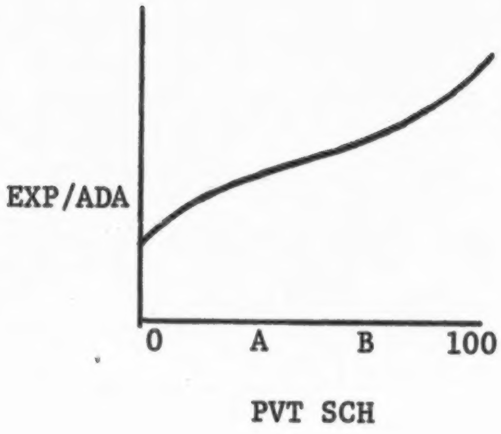
VII. Percentage of Elementary School Students in Private Schools

The direction of this variable can be conceived of in two ways, depending upon whether one thinks of it as representing demand or ability. If we think of it as a demand variable, those parents who have children in private schools will be less interested in helping to support the public schools, and therefore we should expect it to have a negative effect upon the dependent variable. If, on the other hand, we think of it as an ability variable, we realize that the taxpaying ability of the parents exists whether the children are in private schools or in public schools; but if the children attend private school they will not contribute to the ADA of the public school. In these terms one would expect the regression coefficient of this variable to be positive.

The combined effect of this variable might be expressed graphically as follows:



From zero percent in private school up to some point labeled A, the number of parents of children in private school is so small that their protests about paying for two sets of schools are ineffective. However, the withdrawal of their children from the public school ADA makes more money available per ADA. From point A to point B, withdrawals of children from the public schools will be counterbalanced by the increasing political power of parents of the children in private school. After point B, there will be so few pupils in the public schools that large increases in expenditures per ADA can be made with very small increases in tax rate. It is clear that the competing influences of withdrawals of pupils and demands of their parents for tax reduction will determine the slope of the curve between A and B, and that it could even be a positive slope, as below:



In either case, our main interest is in the portion of the curve between zero and somewhere between points A and B. We hope that an assumption of linearity between these points is not too unrealistic. Table 8 indicates that the standard regression coefficient and partial correlation coefficient are positive, and the standard error of the regression coefficient indicates that we may place at least 95 percent confidence in the fact that they are positive.

VIII. Ratio of Assessed Valuation to Full Value

This variable may be thought of as an ability variable, in that for a given full value the higher the assessed valuation ratio, the higher the tax base of the school district. On the other hand, it can be thought of as a governmental variable because of the fact that it is subject to manipulation by political forces. We have noted that in this study we used assessed valuation and the assessment ratio rather than full property value, which has been frequently used as a measure in the past. Assessed value divided by the assessment ratio equals full value. By using the two variables, we may separate their effects. For two districts with identical assessed valuations, the district with the lower assessed valuation ratio will have a higher full value of property. It would therefore be expected that the effect of the assessed valuation ratio would be a negative one.

The size of the standard regression coefficient and its standard error is such that the hypothesis is neither proved nor disproved by this regression. What is pointed out is the fact that assessed valuation per ADA is a much more important component of property value than the assessment ratio in determining expenditures per ADA. It follows, then, that assessed value is more important than full value. This would indicate that assessors, by raising or lowering the average assessment ratio, may have a very important effect upon the overall expenditures of a school district.

IX. Logarithm of Total Average Daily Attendance

The multiple regression technique assumes linearity of relationships. ADA, as a measure of district size, is intended to measure the extent to which economies of scale occur. It is intuitively evident that such economies, if they occur, are more apt to be linearly related to a proportional change in size than to an absolute change in size. That is, there is apt to be a greater economy realized between 20,000 ADA and 50,000 ADA than between 1,020,000 ADA and 1,050,000 ADA. It therefore seemed appropriate to use the logarithm of ADA as a variable, rather than ADA itself. The use of log ADA has another advantage in that its distribution is not so badly skewed as that of ADA.

This variable should be thought of as a governmental variable because of the fact that the size of a district is determined to a great extent by the artificial drawing of the boundary lines of the school district, and, in many instances, by annexations to the school district from time to time. It was hypothesized that the effect of this variable would be negative. That is, the larger the absolute size of the school district, the lower the expenditures per ADA, because of economies of scale. While the standard regression coefficient is negative, it is small and the standard error is large. The effect is not a significant one.

X. Board Appointed or Elected

The whole matter of governmental variables is a difficult one conceptually. Governmental variables have been understood as a cluster of intervening variables that in some manner mediate the effects of the variables of ability and demand. The general hypothesis has been that governmental arrangements either facilitate the expression of ability and demand in the determination of school expenditures, or tend to hinder it. The variables we have chosen have, in most instances, been designed to reflect the extent to which these governmental arrangements facilitate the expression of the will of the public.

The difficulty comes when one attempts to formulate a directional hypothesis with regard to how such a governmental variable will operate. Suppose, for example, that the board is appointed rather than elected. One can postulate conditions under which the expression of the public's will is relatively hindered rather than facilitated by this arrangement, as compared with an arrangement where the board is elected. However, what effect will this have upon expenditures? If one assumes the public's will being relatively hindered, it is to be assumed that the will of some minority will be relatively facilitated by virtue of its ability to get to members of the board who do not feel an urgency to comply with the voters' will. If the minority who are able to get to the board consist of large taxpayers, it may be assumed that expenditures would be lower than they would if the public had more access to the governmental mechanism. If, on the other hand, the minority consists of school employees who are anxious that their salaries be increased, one might expect expenditures to be higher than they would otherwise be. This ambivalent characteristic of governmental variables, whereby the same variable may act in a positive way in one district and in a negative way in another district, may explain the fact that these variables have turned out in our regression to have relatively little explanatory power, and may mask the fact that they are actually important variables in any particular district.[12]

In our regression, if the board was appointed we coded this variable one; if the board was elected we coded it zero. One may see from looking at Table 8 that 24 percent of the boards in our sample were appointed. The standard regression coefficient and the partial correlation coefficient are both negative, indicating that in our sample the fact that a board is appointed tends to reduce expenditures per ADA. However, the standard error of the regression coefficient is so large that we can have little confidence in the fact that the regression coefficient is truly negative.

XI. Business Manager Reports Directly to the Board of Education

This variable was included because we felt it might be important in the sample of large cities. In the past, many large cities have had an arrangement whereby both a superintendent and a business manager report directly to the board independently of each other. The hypothesis here is that where the board is interested in controlling expenditures independently of the educational program recommended by the superintendent, expenditures will be lower than they otherwise would be. In our sample, if the business manager reports directly to the board, we coded the district one. Table 8, then, indicates that 15 percent of the districts in our sample have business managers who report directly to the board. The regression coefficient, as hypothesized, is negative, but the standard error is so very large that no confidence whatsoever can be placed in this finding.

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[12] Findings which give tentative confirmation to this hypothesis are reported on pages 126 and 127.

XII. Board Selected at Large or by Wards

If the board of education was selected at large from the district, this variable was coded one. Table 8 indicates that 79 percent of the districts in our sample had boards selected in this fashion. The hypothesis here is similar to that for an elected versus an appointed board. If the board is selected by wards, it would be expected that the individual members of the board would be more responsive to the voters' wishes in their ward than would be the case if the members of the board were selected from at large in the district. We have the same problem of generating a directional hypothesis here as we had for method of selection. The regression coefficient indicates that the effect is positive. That is, when the board is selected at large, expenditures will be higher than where the board is selected by wards. However, the standard error here is such that we cannot have any confidence that this coefficient is truly positive. Here again, it may well be that the fact that this variable is an important one, in a positive direction in some districts and in a negative direction in other districts, is being masked in our regression by a combination of positive and negative effects.

XIII. Assessor Elected

This variable also is an attempt to measure the access of voters to the mechanism that determines school expenditures, and once again we have difficulty in making a directional hypothesis. However, we may assume that if the assessor is elected, he will tend to keep assessments down on single-family residences. In order to keep the assessed valuation up, then, he will have to increase the assessment ratio on commercial and industrial property. Naturally, he will meet resistance, and the ultimate result may well be to depress valuation below what it might be if the assessor were appointed. If any directional hypothesis is to be made about this variable, it would be that the effect of the assessor being elected would be negative. In our regression, if the assessor was elected it was coded one, and Table 8 indicates that 58 percent of the districts in our sample had elected assessors. The regression coefficient is indeed negative, but the size of the standard error is such that we cannot express any confidence in this result. The variable is virtually of no explanatory value, although like the other variables mentioned, it may well be of considerable importance in one direction or the other in particular districts.

XIV. Other Agency Has Authority to Reduce Board of Education's Budget

This is one of the few governmental variables for which it is possible to make a definite directional hypothesis. While it is frequently true (for our sample, it is true in 25 percent of the cases) that another agency has the authority to reduce the board of education's budget, it is seldom true that this other agency also has the authority to increase the board of education's budget. Even where it does have this authority, it seldom uses it, whereas it uses its authority to reduce the budget rather frequently. On the other hand, in districts where other agencies can reduce the budget, we noted in Chapter III that superintendents and boards tend to request greater increases in the budget than do their counterparts in "independent" districts. On balance, we would assume that if another agency has the power to reduce the board of education's budget (coded one in our regression) the effect upon expenditures would be negative. The fact of the matter is that in our sample the effect upon the expenditures was positive, although the size of the standard error is such that we cannot have as much as 95 percent confidence in this result.

XV. Effective State Maximum Tax Rate or Levy

In the abstract, it is easy to form an hypothesis about the existence of an effective state maximum tax rate. The hypothesis is that where an effective state maximum tax levy exists, there will be a ceiling on possible expenditures by a district which may be below the level of expenditures that the inhabitants of the district desire and can afford to support. The difficulty comes in estimating this ceiling effect in districts in 36 different states, in each of which the state regulations with regard the maximum tax rate or levy are different. In addition, the regulations within any particular state may vary from district to district depending upon the size and wealth of the district. For example, in 7 of the 14 great cities in this study the maximum allowable tax rate is lower than it is in the smaller districts surrounding the city. To make the matter more complicated, the voters of the district often may, under more or less stringent regulations, vote a higher maximum tax rate for their district than is provided by state law. Also, in some states it is possible for the district to exceed the maximum set by state law without a vote of the people, by means of taxes for specified purposes not subject to the maximum. A single variable cannot do a very good job of distinguishing among the tremendous complexities of state regulation of local school district taxation. Probably even a number of variables would do little better.

We decided to make the attempt, however, and in gathering data asked districts the following questions:

1. In 1959-60 did the state set a maximum tax levy which applied to your district (a specific number of mills or cents, or a percentage applied to assessed valuation, or a number of dollars per unit of assessed valuation)?

2. If your answer to Question One was yes, was it legally possible for your district to exceed the state set maximum?

3. If your answer to Question Two was yes, did your district actually exceed the state set maximum in 1959-60?

If the state set a maximum tax levy for the district which could not legally be exceeded, we said that there was an effective state maximum. Also, if the state set a maximum levy which could legally be exceeded, but which the district did not actually exceed, we said there was an effective state maximum. Our reasoning on this was that many districts find themselves pushing against the tax limit the majority of the time, and would presumably exceed this limit if it were easy to do so. The fact that they were not exceeding this limit may indicate that state regulations regarding elections or other methods of overriding the state maximum tax rate were sufficiently restrictive that the district found it a practical impossibility to exceed the state maximum, even though it was not a legal impossibility. Unfortunately, this is rather an unsatisfying way of determining whether or not there is an effective state maximum tax, because the district may not have exceeded the state maximum for other reasons. Ability to pay for education in the district might be high compared with that in the rest of the state, or demand for education in the district might be low. Table 8 indicates that 41 percent of the districts in our sample had an effective state maximum tax rate as defined above. As hypothesized, the regression coefficient is negative, indicating that this state regulation puts a ceiling on expenditures making them lower than they would otherwise be. However, the standard error is such that we can put little confidence in this finding.

XVI. Percentage of Teachers Not on the Regular Salary Schedule

This variable found its way into our regression as a result of observations in the great cities. In some of these there is a substantial percentage of teachers who are given "temporary" appointments rather than being put on the regular salary schedule. These same teachers, who are usually unqualified for a regular state teaching certificate, sometimes continue as teachers on temporary appointments for many years in these districts. It is possible that the district cannot find, even after diligent searching, fully qualified teachers to replace those with temporary appointments. However, it is also possible that this is a method used by the administration and the board to keep expenditures down. When the data were all in, this turned out to be a somewhat less than satisfying variable. There were only 22 of the 107 districts with more than 5 percent of their teachers not on the regular salary schedule. Six of the 11 districts with more than 10 percent of their teachers not on the regular salary schedule were in New York or Virginia. Table 8 indicates that the effect of this variable is small and positive, and the standard error indicates that we may place practically no confidence in its value as a variable.

REGIONAL DIFFERENCES

The differences, both in the effects of particular predictors, and in the multiple regression coefficient, between this sample of large districts and the districts used in the Ten-State Study, led us to search for ways to explain them. One possibility might be size: these are much larger districts on the average than were in the sample for the Ten-State Study. However, the logarithm of total ADA, which we used as an indicator of district size, turned out to be unimportant as a predictor. Another possibility is location: 48 of the 107 districts of this study are in the South, whereas the Ten-State Study included no Southern districts. We noted that the causes of differences go back some years, to the time when governmental efficiency movements throughout the South established the county as an important unit of local government. At that time, the many small local school districts were combined into larger county school districts. As the population has grown, some of these school districts have become very large in total attendance, but many still retain a good deal of their rural character. Consequently, they may differ considerably from the highly urbanized large school districts in the rest of the country. It was therefore of interest to determine whether the predictors we were using had different effects in the South than in the rest of the country.

In order to do this, we divided our sample of 107 districts into two sub-samples; the 48 Southern districts, and the 59 non-Southern districts.[13] We were interested in finding out the differences in the relative influence of the predictors when all of them were used together, but we also were interested in finding out the relative influence of various combinations of the predictors. We therefore used a step-wise regression on each of the sub-samples. In our step-wise regression, a regression is run using the single predictor that is best correlated with the dependent variable. Then a second regression is done, adding as a second predictor the one that is best correlated with the residuals from the first equation. This process continues until all the variables have been used. An alternative explanation of this process is that at each step the predictor is added to the regression that will explain the greatest portion of the remaining unexplained variance. By converting the regression coefficients thus obtained into standard regression coefficients, and plotting their absolute value, it was possible to obtain graphs which showed the changes in the relative effects of the different variables as additional variables were added. Figures 4 and 5 show the results of this step-wise regression for the two sub-samples.

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[13] For the purposes of this study, the Southern districts were defined as being those in the states of Alabama, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, South Carolina, Tennessee, Texas, Virginia, and West Virginia. The states of Arkansas and North Carolina are also in the South, but none of the districts in our sample were from those states.

The differences in the effects of the variables between the South and the rest of the country are striking. The most important single predictor in the South is assessed valuation per ADA, but as other predictors are added these tend to explain more and more of the same things that assessed valuation explains, and assessed valuation per ADA ends up being a relatively unimportant predictor when numerous other variables are in the regression. The most consistently important variable in the Southern districts is the assessment ratio. The result here is just the reverse of what it appeared to be for the whole sample. The implication is that full value is of more importance than assessed value in the South. As additional variables are added to the regression, the board selection variable becomes the second most important. Its value is negative, indicating that where the board is selected at large, expenditures tend to be lower. As we have seen, a directional hypothesis is difficult to make with the governmental variables. However, given the traditional Southern resistance to "big government," if the board selected by wards is more responsive to the wishes of the people, it may respond to a wish for less governmental expenditure rather than more education.

The variables median years of schooling and percentage of elementary children in private school are both considerably more important in the South than in the rest of the country. On the other hand, when we look at the 59 non-Southern districts it is not surprising, in the light of what was shown for the entire 107 districts, to find unemployment and median family income to be very important predictors (more so than in the Southern districts). It is surprising, though, to find not only that the fact that the assessor is elected is the single most important variable, but also that it continues to be an extremely important variable even as many other variables are added. Its value is strongly negative, as was hypothesized. All the other variables tend to be bunched together at the bottom of the graph.

Figures 6 and 7 give 95 percent confidence bands for the standard regression coefficients for the Southern and non-Southern districts, at the last step of the step-wise regression, where all of the variables are in. Note that these show the fact that some of these regression coefficients are negative, whereas the graphs referred to in Figures 4 and 5 show only the absolute values of the coefficients. Note also how the decrease in sample size has increased the width of the confidence band, decreasing the number of variables that are significantly different from zero. Figure 8 is derived from the same data as Figures 6 and 7. In this figure, the bar is drawn from the origin to the midpoint of the confidence band. The figure, therefore, does not indicate confidence level. What it does is to point out the rather striking differences in the effects of the governmental variables in the South as compared with the rest of the nation. Note that the effect of the ability-demand variables is in the same direction in the South and the non-South, but that six of the nine governmental variables have opposite effects. For those variables where the effects are opposite, the strength of the effect is also very different. In spite of the fact that, as the confidence bands indicate, little confidence can be placed in the value of a particular governmental variable, the fact that most of the governmental variables show opposite effects in the two groups of districts is probably significant. This result gives rather strong support to the hypothesis, expressed previously, that the governmental variables which are unimportant in the total sample are actually of considerable importance in individual instances. However, we emphasize that larger samples are needed to reduce the width of the confidence bands so that more of the variables will achieve significance.

PRICE LEVEL DIFFERENCES

It was impossible to use the step-wise regression technique or the regular multiple regression technique on sub-samples of districts from other regions in the country, because there was an insufficient number in our sample. However, the step-wise regressions referred to above made it abundantly clear that there are some regional differences in school districts. It was decided to put in dummy variables for regions of the country, in order to see how much additional variance the fact that a district is in a particular region would explain. The country was divided into four regions, with the districts allocated to regions as shown in Table 9. These regions correspond generally with the regions used by the U. S. Office of Education in its Statistics of State School Systems, 1959-60.[14]

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[14] In our sample Maryland is considered to be a Southern state, whereas the U. S. Office publication considers it to be a North Atlantic state. In our sample, Texas is a Southern state and Oklahoma is a Midwestern state, whereas the U. S. Office publication considers both to be Western states. For the purposes of this study, we believe our allocation of these states is a more logical one. See Carol Joy Hobson and Samuel Schloss, Statistics of State School Systems, 1959-60, U. S. Department of Health, Education, and Welfare (Washington, D.C.: U. S. Governmental Printing Office, 1963).

In order to assign dummy variables to districts in four regions of the country, it is only necessary to use three dummy variables. These became variables number 17, 18, and 19 in our regression. Each is a dichotomous variable coded either zero or one, and to determine which region a district is in, one must look at all three of the variables. Thus, if a district is in the South, it is coded with a zero for each of the three variables. If it is in the West, its code is 001. If in the Midwest, it is coded 010, and if in the East, it is coded 100. Table 10 shows the results of this regression. Addition of the dummy variables for region increases the percentage of variance explained from 73 percent to 80.5 percent. Note the values of the regression coefficients for these three dummy variables. From the coding just given, it is apparent that if a district is in the South, its expenditures may be predicted by multiplying the regression coefficients for ability, demand, and governmental arrangements by the values for these variables for the district. Regression coefficients for the dummy variables would be ignored for a Southern district, since the value of the variable in a Southern district for each of these three is zero. On the other hand, if a district is in the West, in addition to using the values of the ability, demand, and governmental arrangements coefficients, one should add the value of the regression coefficient for variable 19, since this variable is coded one for a Western district, while variables 17 and 18 are coded zero. Similarly, one would look at the regression coefficient of variable 18 if he is looking at a Midwestern district, and at variable number 17 if he is looking at an Eastern district. The net result can be expressed in another way by saying that if a person wishes to predict the expenditures of a district, he should multiply the value of each ability, demand, or governmental arrangements variable by its regression coefficient, and add the value of the intercept. Then, if the district is in the South he has his prediction. If the district is in the East, he should add $84.55; if the district is in the Midwest, he should add $76.07; and if the district is in the West, he should add $100.73.

The surprisingly large amount of variance explained by these regional variables, compared with the rather disappointing amount explained by the governmental variables, made it imperative to look for an explanation of what the regional variables were acting as proxies for. The values of the regression coefficients suggested a clue: the difference in the number of dollars to be added because a district was in a particular region looked as if it might be a price level difference.

One of the difficulties with trying to fit education into an economic model is that there has never been a satisfactory measure of quantity of education. In measuring expenditures per ADA, we are essentially measuring quantity times price. While we had not ignored price in the past, we had assumed that measures of median family income would tend to correct for this distortion. We now decided that we would tackle the problem more directly by inserting a variable that represented price level. Such a variable is unexpectedly difficult to come by. Indices of consumer prices and wholesale prices are not comparable across the United States, since each index is a ratio of prices in a given area to prices in that same area during a base period. There is also the question of whether either of these indices measures prices of the kinds of commodities mainly consumed by the schools. We decided, rather reluctantly, that a state average of salaries of the instructional staff of the schools would serve as a price level indicator. Our reluctance was due to our recognition that such an index would be an important component of expenditures. Obviously, it would be wrong to use instructional salaries at the district level as a variable, since these constitute the major portion of expenditures per ADA for a particular district. However, a state average for instructional salaries would not be distorted by the socio-economic-governmental characteristics of a particular district. It may, unfortunately, be distorted by socio-economic-governmental conditions in a whole state. The data used were "Average annual salary per member of total instructional staff, by state."[15] As a matter of fact, this price level variable has a zero-order correlation with expenditures per ADA of .78, thus confirming our suspicions that the variable is measuring more than just price level. Nevertheless, in the time available, it was the best measure of price level that could be found, and the results are reported in the table below:

Variables Used	Percentage Variance Explained
Ability-demand variables only.	70.8%
Ability-demand, and governmental variables.	73.0
Ability-demand, and price level.	79.5
Ability-demand, governmental, and price level.	81.2
Ability-demand, governmental, and dummy regional variables.	80.5

COMPARISON OF DATA FOR GREAT CITIES, 107 DISTRICT SAMPLE, AND THE NATION AS A WHOLE

Table 11 gives a comparison of values for the variables measured in the 14 great cities, in the 107 district sample, and for the nation as a whole.

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[15] Hobson and Schloss, p. 77.

To determine the significance of the observed differences between the sample of 107 districts and national norms, a difference of means test was performed on selected variables. The observed standard deviation in the sample of 107 districts was used as an estimate of the standard deviation in the population. The comparison on any variable was a comparison of the mean of a sample with the mean of the population. The Z-score was obtained in the usual manner, by obtaining a ratio of the observed difference and the standard error of the mean. Table 12 reports the comparisons of the sample of 107 school districts with the national population on eight variables. The chi-square test was used to determine the significance of the difference observed on the dichotomous variable (percentage board elected) in this comparison.

Table 13 reports the comparisons between the 14 school district sample as a sub-sample of the 107 school districts on all of the variables examined. Again, differences of means were divided by the standard error of the mean to obtain Z-scores. (Of course, the standard error of the mean differed in this comparison from the first comparison because $N_1 = 107$ while $N_2 = 14$.) Chi-square procedures were used to examine the observed differences on the dichotomous variables.

REPLICATION AND GENERALIZATION

Evans and Potter, in studies related to this one, tested the applicability of this rationale and these variables to different samples. Evans[16] took a sample of 88 school districts with an ADA of between 11,000 and 25,000 in 1960. He was unable to obtain information on some of the variables.

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[16] Evans, "Correlates of Educational Expenditures in Medium Sized School Districts."

He did not use: effective state maximum tax rate, percentage of teachers not on regular salary schedule, the regional dummy variables, and the price level variable. He did a multiple regression using the remaining variables on his 88 districts and on the 107 districts in the great cities sample. The multiple R for the great cities sample was .851; that for the Evans sample was .828. The difference between the two is not significant. As would be expected, there is a significant difference between the means in the two samples for the logarithm of ADA. In addition, there is a difference significant at the .05 level between the means of the samples for owner-occupied housing, percentage non-white, and percentage in private schools. There is no significant difference for any of the other variables. In smaller cities there tends to be a lower percentage of renters. Also, in smaller cities the percentage of non-white is less, showing the tendency of Negroes to crowd into the large central cities. Finally, the percentage of children attending private schools is less in the smaller cities, probably reflecting the fact that large metropolitan areas can support a diverse collection of private schools. It is interesting that there is no significant difference in the measures of wealth between large districts and the somewhat smaller ones, nor is there any significant difference in any of the measures of governmental arrangements. Finally, there is no significant difference in expenditures per ADA between the two sizes of districts.

A comparison of standard regression coefficients reveals that these variables have, in general, the same effects in medium-sized districts as they do in large districts. There are some exceptions. Assessed valuations per ADA and percentage unemployed are both of minor importance in the Evans sample, whereas they are of major importance in the great cities sample. On the other hand, percentage of students in private schools is of considerably greater importance as a predictor in the Evans sample than in the great cities sample.

Potter[17] studied 85 of the same districts used in the present study, using 1950 data. He, too, was not able to get data on all of the variables used in this study. He did not use: percentage in private schools, board appointed/elected, effective state maximum tax rate, percentage of teachers not on the regular salary schedule, and the price level variable. He compared a regression on these data with a regression on the same 85 districts using the 1960 data for the same variables. He found a significant difference between the multiple correlation coefficients. That for 1960 was .896; that for 1950, .599. He also tested for significance of difference between means of the variables. There is a significant difference in five of the means: logarithm of ADA, assessed valuation per ADA, median family income, median years schooling, and assessed valuations per ADA all rose significantly during this decade for these 85 school districts. There are no other significant differences between the variables. The fact that there is not a significant difference in percentage non-white in these districts between 1950 and 1960 is in itself an interesting finding. The fact that there is no significant difference in any of the governmental arrangements variables was to be expected, and is another indication of that fact that institutional arrangements tend to change only slowly with time.

Because of the large difference in the multiple correlation coefficient between the Potter and great cities samples, and because none of the regression coefficients in the Potter sample were significantly different from zero, detailed comparison of the regression coefficients is not warranted.

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[17] Potter, "Educational Expenditures in Large City School Districts, 1950-1960."

It is worth noting, however, that of the 15 independent variables used, only two had regression coefficients which differed in sign between 1950 and 1960, and in both of these the coefficients are close to zero.

In summary, it may be said that the rationale and the variables used in this study appear to work equally well with smaller districts in 1960. However, there appear to have been significant changes in the predictive value of these variables between 1950 and 1960 for the great cities districts.

SUMMARY OF STATISTICAL FINDINGS

An exploratory statistical analysis of the correlates of educational expenditures was done, using multiple regression techniques, on 107 of the 119 largest school districts in the United States in 1959-60. Major findings of the study are as follows.

1. A careful effort was made, by obtaining data at the census tract level, to get census data for an area coterminous with the area of the school district. Regressions using these refined data were compared with regressions using data for the city or county most closely associated with the school district. The errors introduced by using the unrefined data are not significant.

2. The basic ability-demand rationale used in the Ten-State Study is confirmed in this study.

3. A surprising finding is the large positive regression coefficient for percentage unemployed, indicating that the higher the percentage of unemployment, the higher the expenditures per ADA. This effect appears to be confined to large districts in 1960, and may reflect the effect of governmental rigidities in the face of changing socio-economic conditions.

4. The governmental variables defined and measured in this study are unimportant. It is postulated that these may be important for each individual district, but that the effect of a particular variable may be positive in one district and negative in another, so that in the aggregate the effects tend to cancel out.

5. There is a distinct difference in the effects of many of the variables in districts in the South, compared with their effects in non-Southern districts. In particular, many of the governmental variables have opposite effects.

6. General price level in a state or region may be a major determiner of the level of expenditures of districts in that state or region. A better price level indicator is needed before we can be confident that this is so.

Table 14 gives a summary of all of the raw data used in the statistical analysis. Table 15 lists the full name and abbreviation for each of the 107 school districts. Table 16 gives the simple correlations among the variables.

TABLE 7

ABBREVIATIONS AND DEFINITIONS FOR VARIABLES

Variable	Definition
AV/ADA	Assessed valuation per unit of average daily attendance for the fiscal year 1959-60 or for the calendar year 1960.
MFI	Median family income in 1960 (U. S. census data).
OOH	Percentage of occupied housing occupied by owner in 1960. (U. S. census data).
MYS	Median years of schooling of the adult population over age 25 in 1960 (U. S. census data).
UNEMP	Percentage of labor force unemployed, both male and female, in 1960 (U. S. census data).
NON-WH	Percentage of population non-white in 1960 (U. S. census data).
PVT SCH	Percentage of elementary school pupils attending private schools in 1960 (U. S. census data).
AV RATIO	Ratio of assessed valuation to full value in 1960 (U. S. census data for single-family, non-farm dwellings in 1960, except Texas where ratio given is estimate furnished by local school district).
LOG ADA	Base 10 logarithm of average daily attendance of the district in 1959-60, excluding kindergarten and adult school.
BD APP	Board of Education appointed (coded 1) or elected (coded 0).
BUS MGR	Business manager reports directed to board of education (coded 1) or to superintendent (coded 0).
BD SEL	Board selected at large (coded 1) or by wards (coded 0).
ASS EL	Assessor elected (coded 1) or appointed (coded 0).
OTH AG	Another governmental agency has authority (coded 1) or does not have authority (coded 0) to reduce the board of education budget.

TABLE 7--Continued

Variable	Definition
ST MAX	There exists (coded 1) or does not exist (coded 0) an effective state maximum tax rate or levy. (See text for further explanation of this variable.)
TEACH	Percentage of full-time teachers not on the regular salary schedule.
EXP/ADA	Total current expenditures per average daily attendance for the district in 1959-60.
EAST MWEST WEST	Dummy variables for region. Coding is 000 for Southern districts, 001 for Western districts, 010 for Midwestern districts, and 100 for Eastern districts.
PRICE	State average salary of total instructional staff (1960), used as an indicator of price level.

TABLE 8

SELECTED STATISTICS FOR 16 INDEPENDENT VARIABLES USED SIMULTANEOUSLY TO PREDICT EXPENDITURES PER ADA

Variable	Mean	Standard Deviation	Regression Coefficient	Standard Regression Coefficient	Standard Error of Standard Regression Coefficient	Partial Correlation Coefficient	Zero Order Correlation Coefficient
AV/ADA	13,015.	6,772.	.00258	.200*	.099	.209	.430
MFI	5,935.	923.	.0353	.374**	.098	.372	.554
OOH	58.48	12.76	- 1.61	-.235**	.077	-.305	-.249
MYS	11.009	1.018	18.8	.219*	.100	.226	.170
UNEMP	5.181	1.565	22.1	.397**	.072	.500	.309
NON-WH	16.380	11.664	- 1.07	-.143	.087	-.171	-.411
PVT SCH	16.575	11.138	1.56	.199*	.085	.242	.577
AV RATIO	33.74	16.14	- .296	-.054	.085	-.068	-.008
LOG ADA	4.701	.289	- 8.64	-.029	.063	-.048	.157
BD APP	.2430	.4309	-23.1	-.114	.071	-.167	-.040
BUS MGR	.1495	.3583	- .728	-.003	.061	-.005	.079
BD SEL	.7944	.4061	4.49	.021	.059	.038	.138
ASS EL	.5794	.4960	- 4.27	-.024	.066	-.039	-.076
OTH AG	.2523	.4364	20.4	.100	.067	.159	.107
ST MAX	.4112	.4944	-10.5	-.059	.062	-.101	-.194
TEACH	3.944	7.732	.782	.069	.072	.101	.235
EXP/ADA	348.66	87.18					

*Significant at the .05 level.
**Significant at the .01 level.

Sample Size: 107 school districts
Multiple R: .854
Percentage Variance Explained: 73.0%
Standard Error of Estimate: $49.17
Intercept ("a" value): -$79.06

TABLE 9

ASSIGNMENT OF DISTRICTS BY REGION

Southern Districts

Districts in the states of:

- Alabama
- Florida
- Georgia
- Kentucky
- Louisiana
- Maryland
- Mississippi
- South Carolina
- Tennessee
- Texas
- Virginia
- West Virginia

Eastern Districts

Districts in the states of:

- Massachusetts
- New Jersey
- New York
- Pennsylvania
- Rhode Island

Midwestern Districts

Districts in the states of:

- Illinois
- Indiana
- Iowa
- Kansas
- Michigan
- Minnesota
- Missouri
- Nebraska
- Ohio
- Oklahoma
- Wisconsin

Western Districts

Districts in the states of:

- Arizona
- California
- Colorado
- Nevada
- New Mexico
- Oregon
- Utah
- Washington

TABLE 10

SELECTED STATISTICS FOR 19 INDEPENDENT VARIABLES USED SIMULTANEOUSLY TO PREDICT EXPENDITURES PER ADA (INCLUDING 3 DUMMY VARIABLES FOR REGION)

Variable	Regression Coefficient	Standard Regression Coefficient	Standard Error of Standard Regression Coefficient	Partial Correlation Coefficient
AV/ADA	.00262	.203*	.087	.243
MFI	.0208	.219*	.090	.253
OOH	- .292	-.042	.079	-.057
MYS	11.12	.130	.090	.152
UNEMP	12.19	.219**	.073	.305
NON-WH	.149	.019	.083	.026
PVT SCH	1.277	.163*	.083	.207
AV RATIO	.171	.031	.080	.042
LOG ADA	4.40	.015	.056	.028
BD APP	-18.2	-.090	.063	-.151
BUS MGR	-27.1	-.111*	.056	-.208
BD SEL	- 6.09	-.028	.054	-.056
ASS EL	-16.4	-.094	.061	-.164
OTH AG	24.0	.120*	.059	.214
ST MAX	- 8.75	-.050	.056	-.095
TEACH	.435	.039	.062	.066
EAST	84.55	.308**	.080	.382
MWEST	76.07	.371**	.076	.465
WEST	100.73	.470**	.099	.453

*Significant at the .05 level.
**Significant at the .01 level.

Sample size: 107 school districts
Multiple R: .897
Percentage Variance Explained: 80.5%
Standard Error of Estimate: $42.46
Intercept ("a" value): -$56.70

TABLE 11

COMPARISON OF TWO LARGE SCHOOL DISTRICT SAMPLES WITH NATIONAL DATA ON SELECTED VARIABLES, 1960[a]

	Variables	14 School District Sample (Mean)	107 School District Sample (Mean)	United States
1.	Assessed Valuation Per ADA	$19,921.00	$13,016.00	$10,953.00[b]
2.	Median Family Income	6,052.00	5,934.00	5,660.00
3.	Percentage Owner-Occupied Housing	42.3%	58.0%	61.9%
4.	Median Years Schooling	10.3	11.0	10.6
5.	Percentage Unemployed	6.4%	5.2%	5.1%
6.	Percentage Non-White	21.1%	16.4%	11.4%
7.	Percentage Elementary Students in Private School	29.4%	16.6%	14.3%
8.	Assessed Value Ratio	37.1%	33.7%	30.0%[c]
9.	Percentage Having Board Elected	50.0%	76.0%	85.9%
10.	Percentage Having Business Manager Reporting to Board	22.2%	15.0%	NA
11.	Percentage Having Board Selected at Large	85.7%	79.0%	NA
12.	Percentage Having Assessor Elected	50.0%	58.0%	NA
13.	Percentage in which Other Agency Can Reduce Budget	28.4%	25.0%	NA
14.	Percentage Having Effective State Maximum on Taxes	50.0%	41.0%	NA
15.	Percentage Teachers Not on Salary Schedule	9.7%	3.9%	NA
16.	Expenditures Per ADA	$410.78	$348.66	$369.00

NA - Not Available

[a] Sources: Items 2-7, U. S. census data, 1960; Items 1, 8-15, local school officials; Item 16 (for the 14 and 107 school district samples), U. S. Office of Education; Item 16 (for the United States), National Education Association.

[b] Assessed valuations derived from U. S. Bureau of Census, Census of Governments, 1962, Vol. II, Taxable Property Values (1961 assessment data), divided by 1960 ADA from U. S. Office of Education data.

[c] Based on authors' estimate of $1.2 trillion full market value in 1961.

TABLE 12

COMPARISON OF THE SAMPLE OF 107 SCHOOL DISTRICTS WITH THE DATA FOR THE UNITED STATES

Variables	United States		Sample of 107 School Districts	
	Mean	S.E. of Mean	Mean	Z-score
EXP/ADA	$ 369.00	$ 8.43	$ 348.66	2.41*
MFI	5,660.00	89.36	5,934.00	3.07**
OOH	61.9%	1.24%	58.0%	3.15**
UNEMP	5.1%	.15%	5.2%	.67
NON-WH	11.4%	1.13%	16.4%	4.42**
PVT SCH	14.3%	1.07%	16.6%	2.15*
	Mean		Mean	χ^2
BD APP	85.9%		76.0%	8.66**

*Significant at the .05 level.
**Significant at the .01 level.

TABLE 13

COMPARISON OF THE SAMPLE OF 14 GREAT CITIES SCHOOL DISTRICTS WITH THE DATA FOR THE 107 SCHOOL DISTRICTS

Variables	Population of 107 School Districts		Sample of 14 Great Cities	
	Mean	S.E. of Mean	Mean	Z-score
AV/ADA	$13,016.00	$1,810.43	$19,921.00	3.81**
MFI	5,934.00	247.06	6,052.00	.45
OOH	58.0%	3.42%	42.3%	4.59**
MYS	11.0	.27	10.3	2.59**
UNEMP	5.2%	.43%	6.4%	2.79**
NON-WH	16.4%	3.13%	21.1%	1.50
PVT SCH	16.6%	2.97%	29.4%	4.31**
AV RATIO	33.7%	4.3%	37.1%	.79
EXP/ADA	$348.66	$23.31	$410.78	2.66**
	Mean		Mean	χ^2
BD APP	76.0%		50.0%	5.19*
BUS MGR	15.0%		22.2%	.57
BD SEL	79.0%		85.7%	.38
ASS EL	58.0%		50.0%	.36
OTH AG	25.0%		28.4%	.08
ST MAX	41.0%		50.0%	.47
TEACH	3.9%		9.7%	1.26

*Significant at the .05 level.
**Significant at the .01 level.

TABLE 14

SUMMARY OF RAW DATA

DISTRICT	ADA (000)	FV/ADA LOCAL (000)	FV/ADA CENSUS (000)	AV/ADA (000)	MFI	OOH	MYS	UNEMP	NON-WHITE	PVT SCH	POP (000)	AV RATIO	BD APP	BUS MGR	BD SEL	ASS EL	OTH AG	ST MAX	TEACH	EAST	MWEST SOUTH = 000	WEST	PRICE LEVEL	EXP/ ADA
BIRM ALA	63.	67.1	67.1	16.3	4950.	53.3	10.1	6.4	39.7	5.2	340.	24.2	1.	0.	1.	1.	0.	1.	0.	0.	0.	0.	4000.	217.
JEFF ALA	50.	23.8	23.7	5.9	5320.	77.0	10.1	5.8	25.1	2.3	600.	24.9	0.	0.	1.	1.	0.	1.	5.	0.	0.	0.	4000.	193.
MOBL ALA	61.	24.2	31.0	6.0	5130.	63.2	10.3	6.1	32.3	12.8	310.	19.5	0.	0.	1.	1.	0.	1.	1.	0.	0.	0.	4000.	201.
MONT ALA	32.	20.5	27.8	5.1	4780.	51.1	11.2	4.6	38.3	7.2	170.	18.5	0.	0.	1.	0.	0.	1.	0.	0.	0.	0.	4000.	183.
TUCSON	35.	28.6	27.7	4.6	5750.	65.2	12.1	5.9	5.0	13.1	200.	16.8	0.	0.	1.	1.	0.	1.	0.	0.	0.	1.	5590.	422.
FRES CAL	42.	27.8	32.0	6.3	6300.	69.5	11.9	6.7	7.1	6.6	200.	19.7	0.	0.	1.	1.	0.	0.	0.	0.	0.	1.	6600.	377.
LNGBEACH	67.	47.4	55.9	11.7	6720.	52.9	12.1	5.0	3.7	13.1	410.	20.6	0.	0.	1.	1.	0.	0.	1.	0.	0.	1.	6600.	489.
L.A. CAL	533.	45.9	54.4	11.1	6810.	46.5	12.1	6.6	15.3	15.2	2970.	20.4	0.	0.	0.	1.	0.	0.	11.	0.	0.	1.	6600.	409.
MTDIABLO	27.	23.3	25.0	5.3	7420.	80.1	12.3	4.9	1.5	4.3	100.	21.4	0.	0.	1.	1.	0.	0.	0.	0.	0.	1.	6600.	423.
OAKLAND	56.	44.9	62.7	11.3	6300.	47.5	11.4	7.9	26.4	14.4	370.	18.0	0.	0.	1.	1.	0.	0.	0.	0.	0.	1.	6600.	470.
SAC CAL	41.	39.4	36.3	8.6	6950.	59.8	12.1	6.1	12.1	12.2	220.	23.7	0.	0.	1.	1.	0.	0.	0.	0.	0.	1.	6600.	458.
SANDIEGO	92.	38.9	44.4	9.4	6640.	52.5	12.2	6.9	7.9	10.7	560.	21.1	0.	0.	1.	1.	0.	0.	0.	0.	0.	1.	6600.	416.
S.F. CAL	87.	67.0	139.8	16.5	6720.	35.0	12.0	6.2	18.4	25.1	740.	11.8	1.	0.	1.	1.	0.	1.	0.	0.	0.	1.	6600.	448.
SANJOSE	22.	48.0	57.0	12.6	6410.	54.1	11.1	8.6	4.3	10.4	130.	22.0	0.	0.	1.	1.	0.	0.	0.	0.	0.	1.	6600.	462.
STKN CAL	29.	25.3	25.7	5.9	5800.	59.5	10.0	8.7	14.0	8.2	120.	23.0	0.	0.	1.	1.	0.	0.	12.	0.	0.	1.	6600.	409.
TOR CAL	23.	38.4	45.9	9.3	8050.	79.4	12.4	4.5	1.4	14.0	100.	20.2	0.	0.	1.	1.	0.	0.	0.	0.	0.	1.	6600.	391.
DENVER	75.	46.5	53.0	15.0	6360.	53.5	12.1	3.6	7.1	17.5	490.	28.3	0.	1.	1.	0.	0.	0.	6.	0.	0.	1.	5000.	431.
JEF COLO	28.	29.9	31.1	7.8	7200.	75.3	12.5	2.6	0.4	11.0	130.	24.9	0.	0.	1.	1.	0.	0.	0.	0.	0.	1.	5000.	329.
BROW FL	54.	24.3	20.1	12.5	5000.	74.3	11.9	5.5	16.6	9.9	330.	62.1	0.	0.	1.	1.	0.	1.	0.	0.	0.	0.	5080.	321.
DADE FL	146.	29.1	32.4	13.7	5350.	59.4	11.5	5.7	14.9	11.2	940.	42.4	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	5080.	347.
DUVAL FL	88.	11.7	14.5	4.9	5350.	66.2	10.8	4.4	23.4	6.0	460.	33.7	0.	0.	1.	1.	1.	1.	2.	0.	0.	0.	5080.	256.
ESCAM FL	35.	12.7	22.4	12.7	5170.	70.1	10.7	5.3	20.9	9.4	170.	56.6	0.	0.	1.	1.	0.	1.	0.	0.	0.	0.	5080.	262.
HILSB FL	71.	12.6	15.0	6.8	4620.	71.0	10.1	5.0	14.0	7.1	400.	45.0	0.	0.	0.	1.	1.	1.	1.	0.	0.	0.	5080.	279.
ORANG FL	48.	17.2	19.0	9.3	5220.	68.7	11.8	5.0	15.0	6.5	260.	49.0	0.	0.	1.	1.	0.	1.	1.	0.	0.	0.	5080.	259.
PLMBE FL	36.	26.1	45.8	26.1	4780.	62.9	11.3	4.6	22.9	9.9	230.	57.1	0.	0.	0.	1.	0.	1.	1.	0.	0.	0.	5080.	312.
PINEL FL	50.	23.0	25.2	13.8	4360.	76.2	11.1	5.1	8.9	7.9	370.	54.8	0.	0.	1.	1.	0.	1.	1.	0.	0.	0.	5080.	315.
POLK FL	39.	21.1	26.6	16.9	4480.	68.3	9.1	5.5	18.5	2.1	200.	63.5	0.	0.	0.	1.	0.	0.	0.	0.	0.	0.	5080.	266.
ATLANTA	86.	30.5	69.3	12.5	5030.	45.6	10.5	3.6	38.3	5.3	490.	18.1	0.	1.	0.	0.	0.	0.	1.	0.	0.	0.	3900.	265.
BIBB GA	29.	13.5	14.8	4.0	5040.	53.4	9.7	4.5	33.4	2.2	140.	27.3	1.	0.	1.	1.	0.	0.	2.	0.	0.	0.	3900.	213.
CHATM GA	36.	22.1	26.4	4.7	4850.	50.9	10.4	5.4	34.1	10.9	190.	17.9	1.	0.	1.	0.	0.	1.	1.	0.	0.	0.	3900.	210.
DKALB GA	38.	20.2	20.9	9.4	7150.	77.6	12.3	2.3	6.4	6.0	190.	44.9	0.	0.	1.	0.	0.	1.	0.	0.	0.	0.	3900.	211.
FULTN GA	23.	16.7	27.8	5.2	6130.	67.5	11.3	3.6	12.2	4.9	110.	18.9	1.	0.	0.	0.	0.	0.	1.	0.	0.	0.	3900.	320.
MUSCO GA	32.	15.7	15.8	15.7	4490.	45.5	10.2	7.0	24.2	3.3	160.	22.4	1.	0.	1.	0.	0.	0.	0.	0.	0.	0.	3900.	219.
RCHMD GA	25.	16.5	16.5	5.1	4260.	55.1	9.7	5.7	31.8	5.3	140.	30.6	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	3900.	221.
CHICAGO	405.	57.2	72.5	25.7	6740.	34.3	10.0	5.4	23.6	35.0	3550.	35.5	1.	0.	1.	1.	0.	1.	13.	0.	1.	0.	5180.	436.
FTWN IND	26.	48.8	51.5	13.6	6580.	72.2	11.7	3.6	6.6	30.8	180.	26.4	1.	0.	1.	1.	1.	1.	0.	0.	1.	0.	5540.	376.
GARY IND	36.	34.5	40.4	8.0	6000.	56.9	10.1	4.0	38.9	12.5	180.	19.8	1.	0.	1.	1.	1.	1.	6.	0.	1.	0.	5540.	376.
INDPOLIS	72.	40.6	43.2	9.2	6110.	55.4	10.8	4.7	20.7	14.5	480.	25.9	0.	1.	1.	1.	1.	1.	2.	0.	1.	0.	5540.	372.
DMOIN IA	36.	26.9	26.3	5.7	6440.	68.1	12.1	3.1	5.1	13.2	210.	21.7	0.	0.	1.	0.	0.	0.	1.	0.	1.	0.	4030.	419.
WCHT KAN	48.	30.7	33.2	6.9	6120.	63.1	12.1	4.8	8.3	11.0	250.	20.7	0.	0.	1.	1.	0.	1.	0.	0.	1.	0.	4450.	394.
JEFF KEN	44.	41.4	42.2	14.0	6800.	85.4	11.4	3.6	3.1	29.7	280.	33.1	0.	0.	0.	1.	0.	1.	0.	0.	0.	0.	3330.	272.
LUVL KEN	43.	39.1	42.8	13.5	4960.	48.9	9.0	6.6	21.0	26.1	330.	31.5	0.	0.	1.	1.	0.	1.	3.	0.	0.	0.	3330.	290.
CADDO LA	44.	30.6	28.4	9.6	4960.	61.6	10.8	5.1	36.5	5.6	220.	34.0	0.	0.	0.	1.	0.	1.	0.	0.	0.	0.	4980.	329.
EBTRG LA	41.	62.3	54.0	10.6	5830.	66.7	11.9	6.1	31.8	15.7	230.	19.7	0.	0.	0.	1.	0.	0.	1.	0.	0.	0.	4980.	343.
JEFF LA	30.	50.3	45.7	4.9	6060.	73.0	10.9	4.6	15.3	33.6	210.	10.8	0.	0.	0.	1.	1.	1.	10.	0.	0.	0.	4980.	251.
ORLNS LA	78.	47.6	48.6	12.1	4810.	37.6	9.0	5.6	37.4	32.3	630.	24.9	0.	1.	1.	1.	0.	0.	0.	0.	0.	0.	4980.	336.
ANARN MD	37.	24.7	26.8	12.2	6500.	72.8	10.4	4.1	14.8	14.3	210.	45.4	1.	0.	1.	0.	1.	0.	60.	0.	0.	0.	5560.	309.
BALTCITY	141.	33.6	31.7	21.1	5660.	54.3	8.9	6.5	35.0	19.6	940.	66.7	1.	0.	1.	0.	1.	0.	16.	0.	0.	0.	5560.	385.
BLTCO MD	76.	39.9	39.9	22.1	7100.	78.1	10.9	3.6	3.6	25.2	490.	55.5	1.	0.	1.	0.	1.	0.	25.	0.	0.	0.	5560.	371.
MONT MD	67.	36.7	40.5	19.1	9320.	69.8	12.8	1.3	3.9	21.4	340.	47.1	0.	0.	0.	0.	1.	0.	1.	0.	0.	0.	5560.	433.
PRGEO MD	61.	27.1	29.9	13.7	7470.	60.9	12.1	2.2	9.1	21.2	360.	46.0	1.	0.	1.	0.	1.	0.	3.	0.	0.	0.	5560.	340.
BOSTON	78.	28.5	54.0	18.7	5750.	27.3	11.2	5.0	9.8	33.3	700.	34.6	0.	0.	1.	0.	1.	0.	10.	1.	0.	0.	5550.	406.
SPFD MAS	26.	25.1	17.3	14.0	5990.	50.3	10.9	5.8	7.7	25.0	170.	81.2	0.	0.	0.	0.	0.	0.	0.	1.	0.	0.	5550.	403.
WORC MAS	26.	23.1	29.4	14.0	5800.	44.4	10.6	4.3	1.2	23.1	190.	47.7	0.	0.	1.	1.	0.	0.	5.	1.	0.	0.	5550.	365.

TABLE 14--Continued

DISTRICT	ADA (000)	FV/ADA LOCAL (000)	FV/ADA CENSUS (000)	AV/ADA (000)	MFI	OOH	MYS	UNEMP	NON-WHITE	PVT SCH	POP (000)	AV RATIO	BD APP	BUS MGR	BD SEL	ASS EL	OTH AG	ST MAX	TEACH	EAST	MWEST SOUTH = 000	WEST	PRICE LEVEL	EXP/ ADA
DRBN MCH	20.	62.5	102.8	23.4	8200.	78.2	12.0	4.9	0.1	27.2	110.	22.8	0.	0.	1.	0.	0.	0.	0.	0.	1.	0.	5650.	569.
DETROIT	250.	39.4	46.0	19.7	6070.	58.2	10.0	9.9	29.9	24.5	1670.	42.9	0.	0.	1.	0.	0.	0.	5.	0.	1.	0.	5650.	437.
FLNT MCH	33.	45.3	42.2	17.9	6340.	73.1	10.9	6.0	17.7	15.1	200.	42.5	0.	1.	1.	0.	0.	1.	0.	0.	1.	0.	5650.	375.
GRPD MCH	23.	51.2	54.0	17.1	6070.	64.4	10.8	6.1	8.3	37.8	180.	31.6	0.	0.	1.	0.	0.	0.	0.	0.	1.	0.	5650.	410.
MINAPOLS	63.	48.5	64.5	6.5	6400.	52.7	11.7	4.3	3.2	25.2	480.	10.0	0.	0.	0.	0.	0.	0.	14.	0.	1.	0.	5280.	463.
STPAUL	37.	59.2	73.0	6.6	6540.	60.3	11.4	4.3	3.0	44.4	310.	9.0	0.	0.	1.	0.	0.	0.	0.	0.	1.	0.	5280.	430.
JKSN MIS	25.	31.0	64.9	12.4	5220.	60.2	12.1	3.7	35.7	6.1	140.	19.1	1.	0.	1.	0.	0.	1.	0.	0.	0.	0.	3310.	250.
K.C. MO	59.	52.5	51.2	13.4	5730.	51.5	11.3	4.9	19.3	16.9	440.	26.1	0.	0.	1.	1.	0.	0.	4.	0.	1.	0.	4540.	400.
STLOUIS	86.	53.7	54.3	19.3	5360.	38.2	8.8	5.4	28.8	27.7	750.	35.6	0.	0.	1.	0.	0.	0.	10.	0.	1.	0.	4540.	378.
OMAHA NB	41.	39.5	42.3	12.0	6230.	60.9	11.9	3.1	8.4	32.0	310.	28.3	0.	1.	1.	1.	0.	0.	3.	0.	1.	0.	3880.	296.
CLRK NEV	23.	41.1	47.7	13.0	7010.	55.9	12.1	6.7	19.5	6.9	130.	27.3	0.	0.	0.	1.	0.	1.	0.	0.	0.	1.	5690.	396.
NEWRK NJ	61.	25.4	27.1	12.1	5450.	22.6	9.0	8.2	34.4	19.3	410.	44.6	1.	0.	1.	0.	1.	1.	20.	1.	0.	0.	5870.	437.
ALBUQ NM	50.	23.7	26.0	3.8	6250.	68.3	12.2	4.8	3.3	15.0	260.	14.6	0.	0.	1.	1.	1.	1.	0.	0.	0.	1.	5380.	315.
BUFLO NY	60.	36.6	67.1	18.3	5710.	44.3	9.6	8.5	13.8	37.6	530.	27.3	1.	0.	1.	0.	1.	1.	23.	1.	0.	0.	6540.	453.
NY CITY	861.	35.2	61.2	29.0	6090.	21.7	10.1	5.2	14.7	30.8	7780.	47.6	1.	0.	1.	0.	1.	0.	22.	1.	0.	0.	6540.	517.
RCHTR NY	37.	40.4	47.0	18.6	6360.	51.4	11.2	5.9	7.6	38.2	320.	39.5	0.	0.	1.	0.	1.	1.	10.	1.	0.	0.	6540.	566.
SYRCS NY	26.	33.8	61.8	16.2	6250.	48.9	11.1	4.6	5.7	30.3	220.	26.2	0.	0.	1.	0.	1.	1.	7.	1.	0.	0.	6540.	499.
YNKRS NY	23.	39.2	53.8	24.3	7470.	38.0	11.7	3.7	4.2	36.7	190.	45.2	1.	0.	1.	0.	1.	1.	15.	1.	0.	0.	6540.	459.
AKRON O	48.	45.8	47.3	16.6	6470.	67.1	10.8	6.0	13.1	18.1	290.	35.2	0.	1.	1.	1.	1.	0.	0.	0.	1.	0.	5120.	376.
CINCIN O	67.	63.2	59.9	25.9	5830.	42.1	9.8	6.7	20.4	28.6	540.	43.3	0.	0.	1.	1.	0.	0.	10.	0.	1.	0.	5120.	427.
CLVLND O	116.	58.8	69.3	24.5	5940.	44.9	9.6	7.5	28.9	27.5	880.	35.4	0.	1.	1.	1.	0.	0.	3.	0.	1.	0.	5120.	397.
COLMBS O	69.	47.4	46.1	17.3	5990.	51.9	11.2	5.3	16.4	16.4	480.	37.5	0.	0.	1.	0.	0.	0.	0.	0.	1.	0.	5120.	338.
DAYTON O	47.	46.5	48.9	19.0	6270.	55.1	10.4	5.5	21.9	17.8	260.	38.9	0.	1.	1.	0.	0.	0.	1.	0.	1.	0.	5120.	411.
TOLEDO O	44.	53.2	53.2	20.4	6280.	63.7	10.4	7.2	12.7	31.1	320.	38.3	0.	1.	1.	1.	0.	0.	5.	0.	1.	0.	5120.	347.
YNGSTN O	23.	53.4	54.1	20.7	5760.	67.1	10.0	7.3	19.0	30.7	170.	38.2	0.	1.	1.	1.	1.	0.	10.	0.	1.	0.	5120.	423.
OKLACITY	56.	26.7	27.3	5.4	5670.	62.5	12.0	3.3	12.8	7.1	300.	19.9	0.	0.	1.	1.	0.	1.	0.	0.	1.	0.	4660.	285.
TULSA OK	57.	26.4	27.3	7.1	6200.	67.4	12.2	4.3	10.0	6.8	290.	25.9	0.	0.	1.	1.	0.	1.	0.	0.	1.	0.	4660.	299.
PTLND OR	65.	32.1	40.5	12.9	6350.	63.6	12.0	5.3	5.0	16.1	430.	31.9	0.	1.	1.	1.	0.	0.	3.	0.	0.	1.	5540.	416.
PHILADEL	214.	27.0	32.0	18.5	5780.	69.2	9.6	6.5	26.7	39.3	2000.	57.7	1.	1.	1.	1.	0.	1.	8.	1.	0.	0.	5310.	402.
PTSBG PA	62.	35.2	54.0	19.3	5610.	48.8	10.0	8.1	16.8	45.9	600.	35.8	1.	0.	1.	1.	0.	1.	10.	1.	0.	0.	5310.	404.
PROVD RI	24.	58.0	53.9	38.7	5070.	35.1	9.8	5.6	5.8	32.7	210.	71.7	0.	0.	0.	0.	0.	0.	2.	1.	0.	0.	5500.	438.
COLMB SC	27.	20.8	38.4	2.5	4700.	54.1	11.1	3.3	33.7	3.3	140.	6.5	1.	0.	1.	0.	1.	0.	1.	0.	0.	0.	3450.	213.
GRNVL SC	42.	28.8	41.7	1.7	4750.	60.9	9.9	2.9	17.6	3.1	210.	4.2	0.	0.	0.	0.	0.	1.	0.	0.	0.	0.	3450.	182.
CHAT TEN	24.	17.5	19.9	7.9	4440.	44.0	9.2	5.6	33.3	4.0	130.	39.6	0.	0.	1.	1.	1.	0.	5.	0.	0.	0.	3930.	278.
MPHS TEN	91.	17.6	20.3	8.8	4920.	58.3	10.2	4.6	37.1	8.9	500.	43.4	0.	0.	1.	1.	1.	0.	0.	0.	0.	0.	3930.	214.
SHLB TEN	28.	14.6	16.2	7.3	4900.	57.0	10.5	4.4	36.4	7.9	630.	45.1	1.	0.	1.	1.	0.	0.	1.	0.	0.	0.	3930.	216.
AMARL TX	24.	30.3	30.3	16.7	5880.	63.4	12.1	3.3	5.8	7.7	140.	55.0	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	4710.	298.
AUSTN TX	30.	24.1	24.1	18.1	5770.	60.7	11.8	3.3	12.8	6.9	200.	75.0	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	4710.	300.
DALAS TX	108.	46.4	46.4	20.9	6060.	59.5	12.0	3.3	18.2	9.0	710.	45.0	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	4710.	282.
ELPAS TX	43.	17.8	17.8	9.8	5120.	51.5	11.4	6.7	3.6	11.4	230.	55.0	0.	0.	1.	1.	0.	1.	0.	0.	0.	0.	4710.	288.
FTWTH TX	64.	23.3	23.3	12.8	5480.	64.5	11.4	4.3	15.8	4.5	360.	55.0	0.	0.	1.	0.	0.	0.	0.	0.	0.	0.	4710.	292.
HOUSTON	150.	45.8	45.8	14.7	5830.	59.5	11.4	4.3	24.7	11.3	910.	32.0	0.	0.	1.	1.	0.	1.	2.	0.	0.	0.	4710.	295.
SANANTON	64.	20.7	20.7	9.3	4420.	57.5	9.2	5.2	10.5	18.1	380.	45.0	0.	0.	1.	0.	0.	1.	0.	0.	0.	0.	4710.	243.
GRNIT UT	33.	18.6	30.8	4.6	6550.	84.8	12.3	2.9	0.6	2.2	140.	15.1	0.	1.	0.	1.	0.	0.	6.	0.	0.	1.	5100.	303.
SLC UTAH	36.	28.3	46.9	7.1	6140.	56.1	12.2	4.0	2.1	4.9	190.	15.1	0.	1.	0.	1.	0.	0.	0.	0.	0.	1.	5100.	306.
FRFAX VA	51.	37.9	42.9	14.3	8610.	76.5	12.7	1.9	5.4	16.9	280.	33.3	1.	0.	0.	0.	1.	0.	2.	0.	0.	0.	4310.	332.
NRFLK VA	46.	24.8	29.7	11.6	4890.	46.6	10.8	5.1	26.4	13.0	310.	39.0	1.	0.	1.	0.	1.	0.	4.	0.	0.	0.	4310.	276.
RCHMD VA	36.	35.2	38.5	29.0	5160.	47.7	10.1	4.2	42.0	7.5	220.	75.5	1.	0.	1.	0.	1.	0.	9.	0.	0.	0.	4310.	335.
SEATL WA	85.	60.1	67.6	9.4	6940.	57.4	12.2	6.1	8.4	16.1	560.	13.9	1.	0.	1.	1.	0.	1.	1.	0.	0.	1.	5640.	393.
SPOKN WA	32.	35.4	33.2	7.0	6070.	66.9	12.1	7.3	2.4	17.8	200.	21.1	0.	0.	1.	1.	0.	0.	0.	0.	0.	1.	5640.	404.
TCOMA WA	28.	31.8	35.1	5.7	5990.	67.5	11.2	6.9	5.2	13.7	150.	16.4	0.	0.	1.	1.	0.	0.	0.	0.	0.	1.	5640.	416.
KNHA WVA	56.	18.6	34.2	10.4	5860.	58.3	10.1	6.1	5.8	3.1	250.	30.5	0.	0.	1.	1.	0.	0.	0.	0.	0.	0.	3950.	234.
MILWAUKE	87.	42.9	46.5	22.5	6660.	48.4	10.4	4.6	8.9	38.1	740.	48.4	0.	1.	1.	0.	0.	1.	3.	0.	1.	0.	4870.	384.

TABLE 15

LIST OF SCHOOL DISTRICTS

State	District	Abbreviation
Alabama	Birmingham	BIRM ALA
	Jefferson County	JEFF ALA
	Mobile County	MOBL ALA
	Montgomery County	MONT ALA
Arizona	Tucson	TUCSON
California	Fresno	FRES CAL
	Long Beach	LNGBEACH
	Los Angeles	L.A. CAL
	Mt. Diablo	MTDIABLO
	Oakland	OAKLAND
	Sacramento	SAC CAL
	San Diego	SANDIEGO
	San Francisco	S.F. CAL
	San Jose	SANJOSE
	Stockton	STKN CAL
	Torrance	TOR CAL
Colorado	Denver	DENVER
	Jefferson County	JEF COLO
Florida	Broward County	BROW FL
	Dade County	DADE FL
	Duval County	DUVAL FL
	Escambia County	ESCAM FL
	Hillsborough County	HILSB FL
	Orange County	ORANG FL
	Palm Beach County	PLMBE FL
	Pinellas County	PINEL FL
	Polk County	POLK FL
Georgia	Atlanta	ATLANTA
	Bibb County	BIBB GA
	Chatham County	CHATM GA
	DeKalb County	DKALB GA
	Fulton County	FULTN GA
	Muscogee County	MUSCO GA
	Richmond County	RCHMD GA
Illinois	Chicago	CHICAGO
Indiana	Fort Wayne	FTWN IND
	Gary	GARY IND
	Indianapolis	INDPOLIS

TABLE 15--Continued

State	District	Abbreviation
Iowa	Des Moines	DMOIN IA
Kansas	Wichita	WCHT KAN
Kentucky	Jefferson County	JEFF KEN
	Louisville	LUVL KEN
Louisiana	Caddo Parish	CADDO LA
	E. Baton Rouge Parish	EBTRG LA
	Jefferson Parish	JEFF LA
	Orleans Parish	ORLNS LA
Maryland	Ann Arundel County	ANARN MD
	Baltimore City	BALTCITY
	Baltimore County	BLTCO MD
	Montgomery County	MONT MD
	Prince George's County	PRGEO MD
Massachusetts	Boston	BOSTON
	Springfield	SPFD MAS
	Worchester	WORC MAS
Michigan	Dearborn	DRBN MCH
	Detroit	DETROIT
	Flint	FLNT MCH
	Grand Rapids	GRPD MCH
Minnesota	Minneapolis	MINAPOLS
	St. Paul	STPAUL
Mississippi	Jackson	JKSN MIS
Missouri	Kansas City	K.C. MO
	St. Louis	STLOUIS
Nebraska	Omaha	OMAHA NB
Nevada	Clark County	CLRK NEV
New Jersey	Newark	NEWRK
New Mexico	Albuquerque	ALBUQ NM
New York	Buffalo	BUFLO NY
	New York City	NY CITY
	Rochester	RCHTR NY
	Syracuse	SYRCS NY
	Yonkers	YNKRS NY

TABLE 15--Continued

State	District	Abbreviation
Ohio	Akron	AKRON O
	Cincinnati	CINCIN O
	Cleveland	CLVLND O
	Columbus	COLMBS O
	Dayton	DAYTON O
	Toledo	TOLEDO O
	Youngstown	YNGSTN O
Oklahoma	Oklahoma City	OKLACITY
	Tulsa	TULSA OK
Oregon	Portland	PTLND OR
Pennsylvania	Philadelphia	PHILADEL
	Pittsburgh	PTSBG PA
Rhode Island	Providence	PROVD RI
South Carolina	Columbia	COLMB SC
	Greenville	GRNVL SC
Tennessee	Chattanooga	CHAT TEN
	Memphis	MPHS TEN
	Shelby County	SHLB TEN
Texas	Amarillo	AMARL TX
	Austin	AUSTN TX
	Dallas	DALAS TX
	El Paso	ELPAS TX
	Fort Worth	FTWTH TX
	Houston	HOUSTON
	San Antonio	SANANTON
Utah	Granite	GRNIT UT
	Salt Lake City	SLC UTAH
Virginia	Fairfax County	FRFAX VA
	Norfolk	NRFLK VA
	Richmond	RCHMD VA
Washington	Seattle	SEATL WA
	Spokane	SPOKN WA
	Tacoma	TCOMA WA
West Virginia	Kanawha County	KNHA WVA
Wisconsin	Milwaukee	MILWAUKE

TABLE 16

SIMPLE CORRELATIONS BETWEEN VARIABLES FOR 107 DISTRICTS

Variables	AV/ADA	MFI	OOH	MYS	UNEMP	NON-WH	PVT SCH	AV RATIO	LOG ADA
AV/ADA	1.00000	0.13760	-0.37012	-0.25317	0.14512	0.01316	0.52521	0.60028	0.27446
MFI		1.00000	0.26894	0.60289	-0.25216	-0.59271	0.29843	-0.16329	0.03075
OOH			1.00000	0.43162	-0.32132	-0.34586	-0.30654	-0.06858	-0.33786
MYS				1.00000	-0.43523	-0.57481	-0.19119	-0.27795	-0.16567
UNEMP					1.00000	0.20079	0.19344	-0.01520	0.15933
NON-WH						1.00000	-0.21980	0.05480	0.18475
PVT SCH							1.00000	0.09914	0.20578
AV RATIO								1.00000	0.10227
LOG ADA									1.00000

TABLE 16--Continued

Variables	BD APP	BUS MGR	BD SEL	ASS EL	OTH AG	ST MAX	TEACH	EXP/ADA
AV ADA	0.15644	0.14483	0.03414	-0.28956	0.11675	-0.12596	0.26177	0.43003
MFI	0.01092	0.06061	-0.01130	-0.05793	0.11269	-0.19108	0.10177	0.55359
OOH	-0.24249	0.02143	-0.14200	0.22330	-0.10930	0.06802	-0.20043	-0.24937
MYS	-0.19238	-0.08407	-0.10945	0.06767	-0.14343	-0.03208	-0.29376	0.17009
UNEMP	-0.04637	0.00840	0.23146	0.26207	-0.16572	0.02223	0.09449	0.30907
NON-WH	0.31216	0.01448	0.04336	-0.01220	0.08624	0.11626	0.02933	-0.41084
PVT SCH	0.11726	0.18274	0.14965	-0.16195	0.19851	0.03839	0.31712	0.57680
AV RATIO	0.04216	-0.02885	-0.00180	-0.23056	0.13598	-0.05165	0.16638	-0.00834
LOG ADA	0.11279	0.09684	0.01857	0.00894	0.04269	0.05891	0.22655	0.15668
BD APP	1.00000	-0.17646	0.18040	-0.22360	0.37321	0.10223	0.39769	-0.03974
BUS MGR		1.00000	0.01879	0.09179	-0.06259	-0.13738	-0.04121	0.07895
BD SEL			1.00000	0.08187	0.08260	0.04919	0.10747	0.13821
ASS EL				1.00000	-0.20245	0.17332	-0.23498	-0.07640
OTH AG					1.00000	0.03923	0.44037	0.10739
ST MAX						1.00000	-0.06795	-0.19355
TEACH							1.00000	0.23527
EXP/ADA								1.00000

FIGURE 3

95 PERCENT CONFIDENCE BANDS FOR STANDARD REGRESSION COEFFICIENTS
16 INDEPENDENT VARIABLES, 107 LARGE SCHOOL DISTRICTS

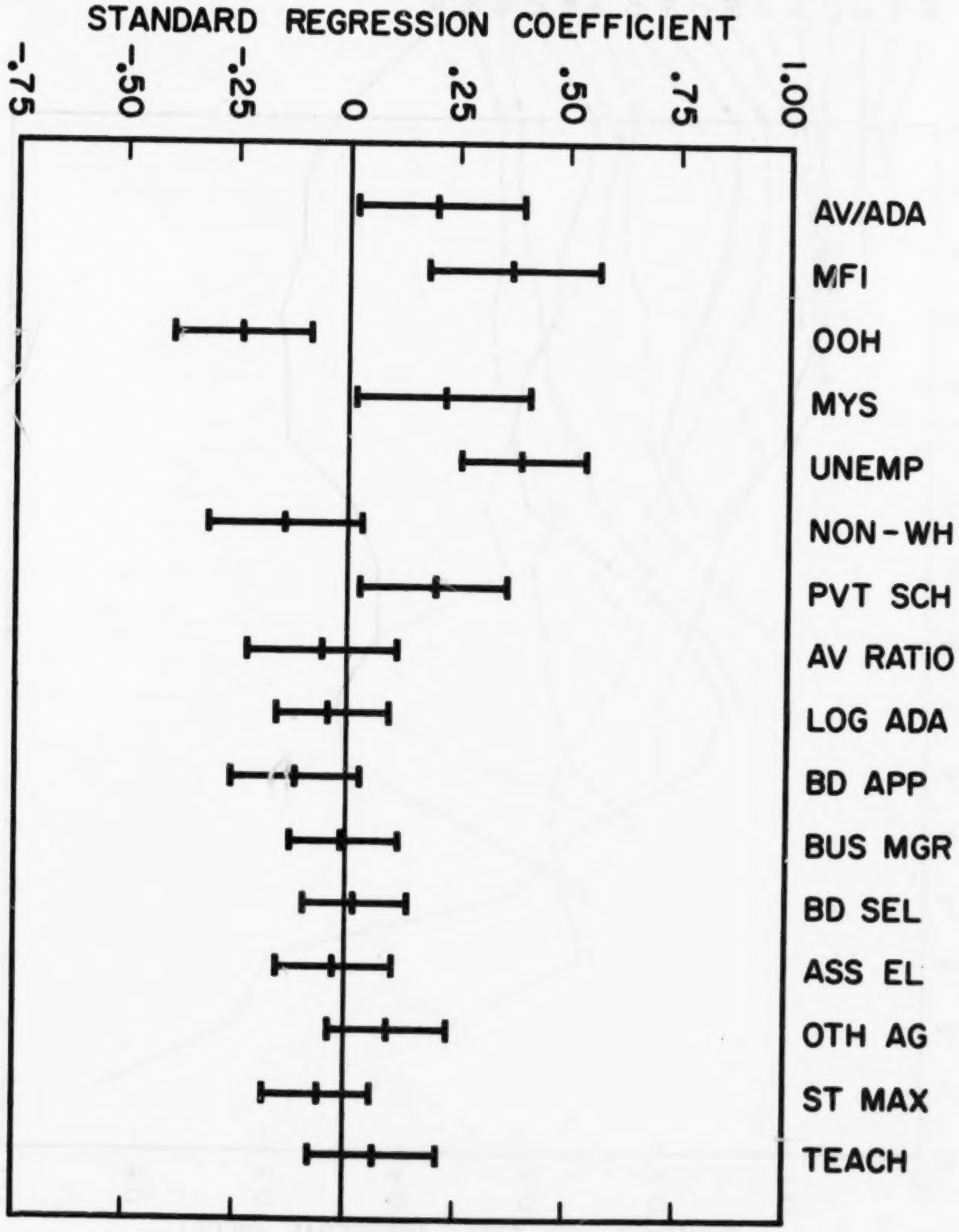


FIGURE 4

STEP-WISE REGRESSION FOR 48 SOUTHERN DISTRICTS

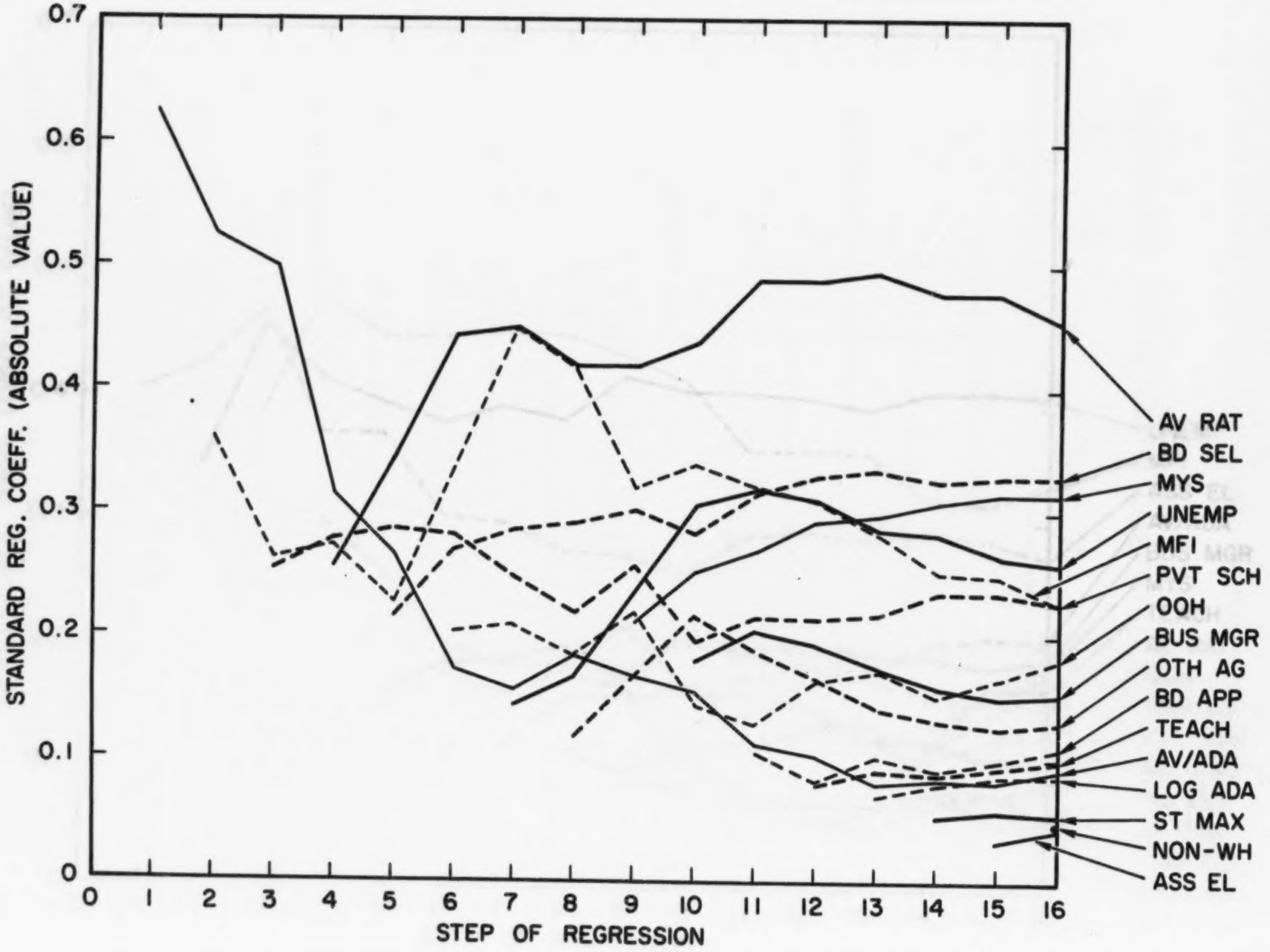


FIGURE 5

STEP-WISE REGRESSION FOR 59 NON-SOUTHERN DISTRICTS

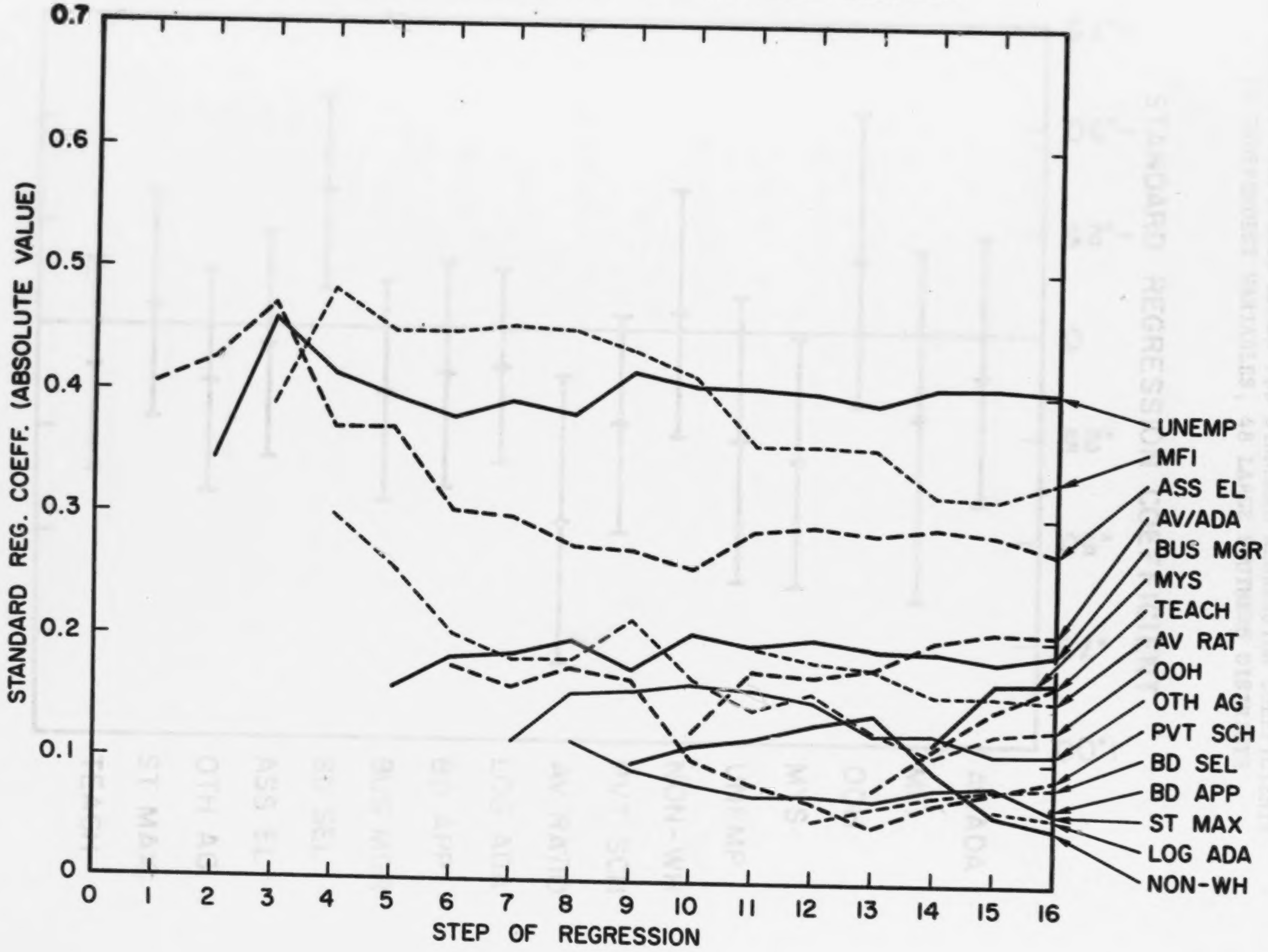


FIGURE 6

95 PERCENT CONFIDENCE BANDS FOR STANDARD REGRESSION COEFFICIENTS
16 INDEPENDENT VARIABLES, 48 LARGE SOUTHERN DISTRICTS

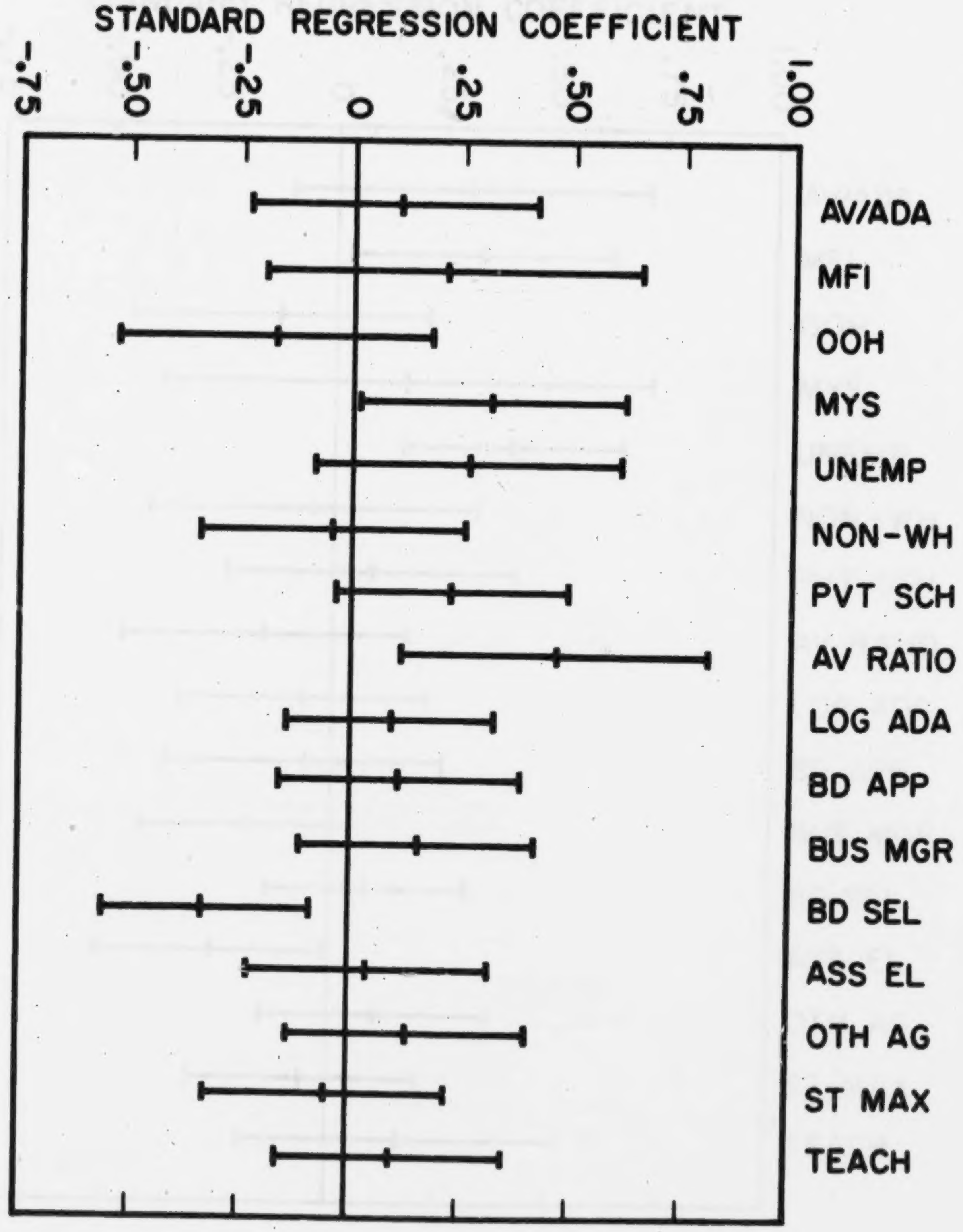


FIGURE 7

95 PERCENT CONFIDENCE BANDS FOR STANDARD REGRESSION COEFFICIENTS
16 INDEPENDENT VARIABLES, 59 LARGE NON-SOUTHERN DISTRICTS

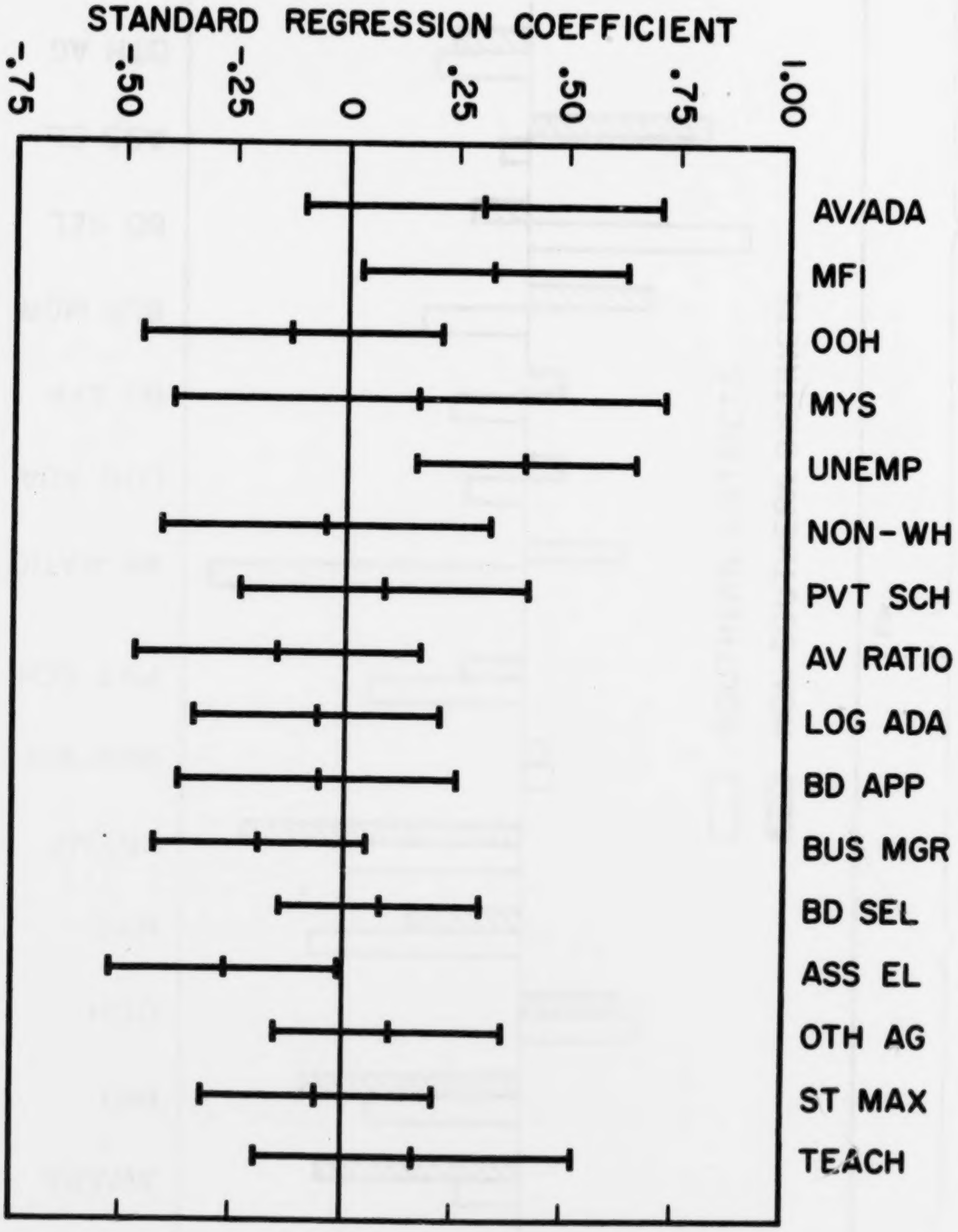
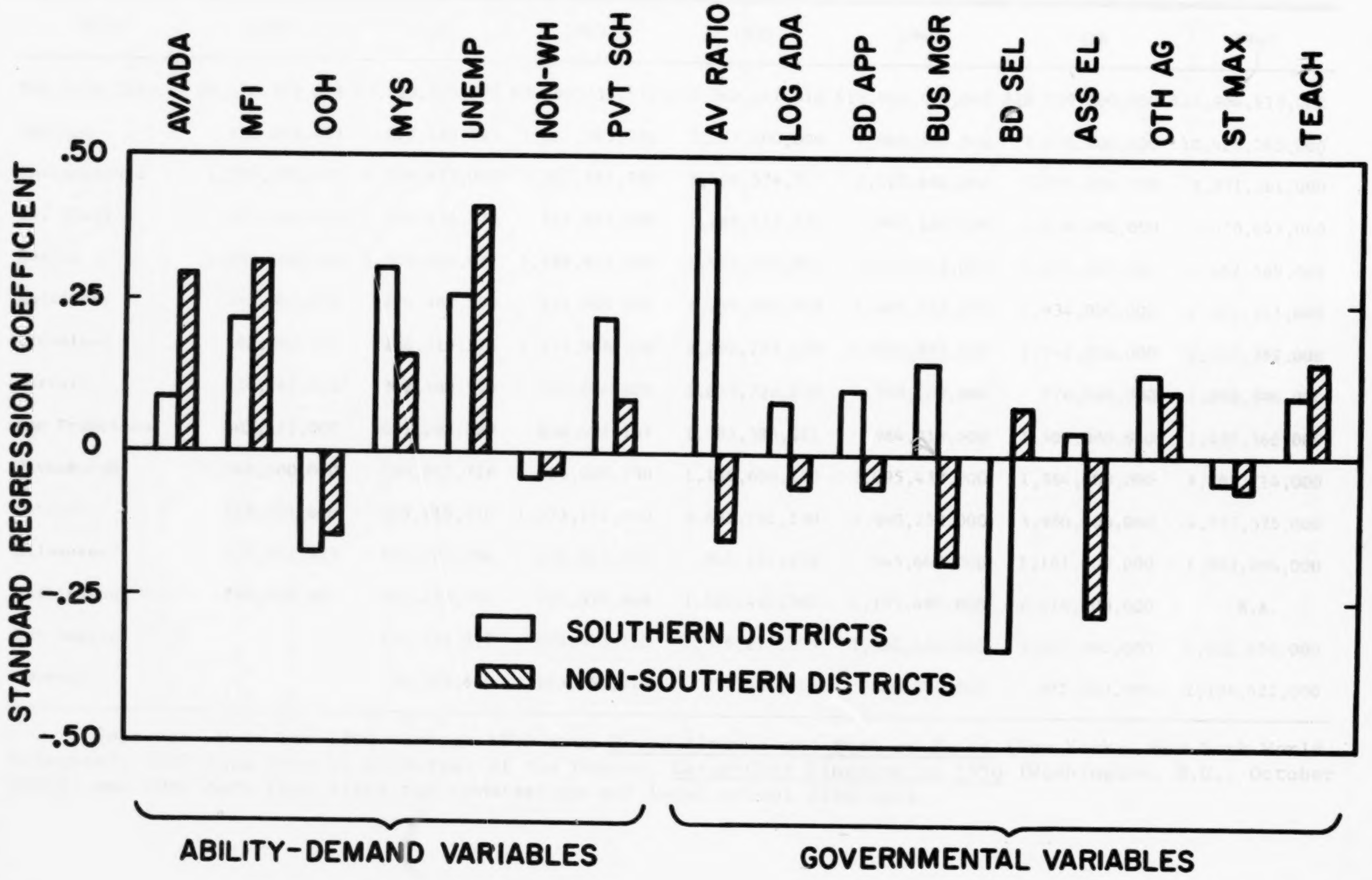


FIGURE 8

STANDARD REGRESSION COEFFICIENTS FOR 16 INDEPENDENT VARIABLES IN SOUTHERN AND NON-SOUTHERN DISTRICTS



APPENDIX A

ASSESSED VALUATIONS IN SELECTED CITIES, 1900-1960

City	1900	1910	1920	1930	1940	1950	1960
New York City	$3,478,352,029	$7,250,500,599	$8,790,735,533	$18,362,061,510	$16,640,634,000	$18,119,000,000	$24,944,418,000
Chicago	220,966,447	477,190,399	1,082,763,780	3,247,000,000	1,948,180,000	8,076,000,000	10,429,265,000
Philadelphia	1,238,596,991	1,358,675,057	2,507,737,784	3,406,574,017	2,528,454,000	3,529,000,000	3,951,361,000
St. Louis	373,561,953	533,456,571	717,693,580	1,289,653,830	892,120,000	1,458,000,000	1,670,647,000
Boston	1,089,808,120	1,348,041,627	1,499,843,198	1,953,231,000	1,550,408,000	1,655,000,000	1,462,569,000
Baltimore	365,847,456	624,482,590	571,908,201	1,159,254,936	1,068,212,000	1,934,000,000	2,975,311,000
Cleveland	142,290,775	256,719,375	1,297,998,920	2,092,159,170	1,036,875,000	1,742,000,000	2,855,352,000
Buffalo	236,964,535	307,300,555	532,084,905	1,079,722,230	960,209,000	976,000,000	1,098,896,000
San Francisco	405,111,000	493,288,889	634,481,167	1,585,326,621	984,015,000	1,509,000,000	1,435,560,000
Pittsburgh	361,000,000	709,905,718	806,020,730	1,136,606,150	1,095,432,000	1,384,000,000	1,201,214,000
Detroit	216,971,000	359,819,910	1,373,102,440	3,681,781,130	1,860,252,000	3,980,000,000	4,937,375,000
Milwaukee	151,971,903	232,227,790	574,014,559	944,151,658	845,609,000	1,161,000,000	1,963,206,000
Washington, D.C.	190,958,987	312,473,714	785,539,666	1,182,463,345	1,193,499,000	2,116,000,000	N.A.
Los Angeles		276,751,517	533,410,310	1,876,277,195	1,362,464,000	3,327,000,000	5,912,659,000
Houston		60,268,660	143,791,310	279,504,515	320,000,000	922,000,000	2,198,622,000

Sources: Data for 1900 through 1940 from World Almanac and Book of Facts (New York: New York World Telegram); 1950 data from U. S. Bureau of the Census, Large-City Finances in 1950 (Washington, D.C., October 1951); and 1960 data from state tax commissions and local school districts.

APPENDIX B

THE BUDGET PROCESS OF THE NEW YORK CITY SCHOOLS

The budget process of the New York City schools[1] is based on five legally defined decision-making points.

1. First, each December the Superintendent of Schools decides on the budget he will recommend to the Board of Education.
2. The Board of Education, in turn, considers the Superintendent's budget, holds public hearings, and recommends a budget (usually only slightly revised) to the Mayor of New York City by December 31 of each year.
3. The Mayor of New York considers the Board of Education's recommended budget along with budget requests from all other city departments and announces his budget decisions by April 15, when he submits to the City Council and the Board of Estimate a proposed budget and a Budget Message.
4. The Board of Estimate and the City Council hold public hearings on the Mayor's budget and make a determination in the middle of May regarding the budgets for all city departments. The decisions of the Board of Estimate and the City Council are subject to veto by the Mayor; vetoes can be overridden by special votes of both the Board of Estimate and the City Council.
5. The state government, particularly the Governor and the Legislature, must determine the amount of state aid to schools in New York City.

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[1] This Appendix was written by James A. Kelly and describes events occurring principally during the 1964-65 school year as the budget for the 1965-66 school year was being developed.

The New York City schools are fiscally dependent upon the municipal government. As we have seen, the school budget must be approved by the Mayor, the City Council, and the Board of Estimate.

Local school revenues are obtained from the city government. New York City levies many taxes, of which the largest two are the property tax and the sales tax.

New York City indicates that all the revenues it allocates for education are obtained from the property tax. In fact, however, the city government could utilize almost any of its revenues for school purposes. It is arguable whether the Board of Education receives revenues from sources other than the property tax. A state constitutional restriction of 2.5 percent on the real estate tax levy is an effective limitation on spending by public agencies in New York City, and consequently, is a definite restraint upon the budget of the Board of Education. The city has levied the maximum permissible property tax rate since before 1960, and has in fact relied heavily upon short-term borrowing (3-5 years). Property tax levies used to retire these notes are not subject to the 2.5 percent limit. Procedures have been initiated to increase this constitutional limitation to 3 percent.

In 1960, 60.4 percent of New York City Board of Education's revenue came from local sources. During Mayor Wagner's tenure (1954-66), expenditures for education rose dramatically in New York City. Mayor Wagner provided very substantial increases in local revenues for the Board of Education during the 1960s. In addition, efforts of schoolmen in New York State to obtain additional state aid for city school systems have been successful, and state aid formulas have been raised twice since 1960. We noted earlier that a special "density factor," providing 10 percent (now 17.5 percent) more aid for cities, was also achieved. Yet despite these increases in state aid, the sharp increases in expenditures per pupil in New York City during the last seven years are primarily due to increases in local revenues.

At each of the five critical decision-making points are collected a number of persons and groups who have a stake in the city's educational expenditures, including school teaching staffs, supervisory and administrative staffs, clerical staffs, custodial staffs, and maintenance staffs. The key members of the administrative staff, who work directly with the Superintendent of Schools, are involved, as are professional associations of supervisors, which attempt to influence spending. Others directly interested in the budget include the memberships, leadership, and paid staffs of several voluntary associations, whose whole or part-time focus is on influencing educational policies.

The Mayor of New York deserves special attention, for it is he, more than any other single person, who shapes educational expenditures in New York City. On the Mayor's staff the City Budget Director and his associates play a key role in advising the Mayor. The City Comptroller, an elected official, is a political power who must be reckoned with in the overall budget process.

At the state level, the actions of the Commissioner of Education, the Board of Regents, the Legislature, and the Governor figure importantly in determining the total revenues that will be available to New York City. Obviously, persons at the state level must play a less direct role in individual local budget processes.

Still others directly involved in the budget process include members of the 25 (now 31) local boards of education serving sub-districts of the New York City School District, their district superintendents of schools, and the innumerable local civic and neighborhood voluntary associations who appear before local boards of education and the City Board of Education on behalf of their budgetary interests.

This list, while not exhaustive, illustrates the variety of persons interested and roles played in the budgetary decisions for the New York City schools. The interest is certainly understandable; the stakes are high. The Board of Education, during the 1965-66 school year, supervised the expenditure of over one billion dollars for current expenditures (including some items spent on behalf of the Board by other city agencies). This money is spent to educate over a million pupils, who range in background from immigrant children who cannot speak English to the children of some of the most sophisticated and economically successful citizens of the United States.

WHAT EVENTS MAKE UP THE BUDGET PROCESS?

The New York schools' budget process is a year-round process. Decisions taken throughout the year have budgetary implications for the following year, particularly with regard to labor negotiations as contracts expire during the school year. These are implicitly part of the budget process.

The budget process itself begins more than a year prior to the fiscal year for which it is being prepared. Thus the budget for the 1965-66 fiscal year went through preliminary preparation stages during the summer of 1964. At that time, the Superintendent of Schools, the Deputy Superintendent for Finance, the Administrator of Business Affairs,[2] and other senior administrators discussed long-range system goals and evaluation of current programs. An all-day conference was held in late August 1964, with the Superintendent of Schools, the Executive Deputy Superintendent, four Deputy Superintendents, and the Administrator of Business Affairs present. At that conference long-range budget strategies were discussed. Specific programs under way or proposed were also discussed in terms of their priority and probable cost.

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[2] The Administrator of Business Affairs is *de facto* the schools' Budget Director.

An appraisal was made of the Mayor's decision-making behavior with respect to the school budget in recent years. The maximum sums of money which the Board of Education ought to request from the Mayor and the maximum amount the Mayor was likely to grant, regardless of how much the Board of Education requested, were estimated. It was pointed out that in the previous year the Board of Education had requested an increase of $113 million (excluding salary raises granted because of negotiations with the United Federation of Teachers, which were financed by supplemental appropriations). Of this requested increase, $80 million was approved. On the basis of this review, the conference participants in 1964 agreed to "shoot at" $120 million as a defensible amount which the Board of Education should request from the Mayor, over and above existing levels of expenditure. Calculations indicated that $68 million would be needed to meet previous commitments and mandated increases, before any new or expanded services could be financed.

The on-going nature of the budget process can be specifically illustrated by the fact that at this same conference the participants agreed to request a supplemental appropriation of $8 million for 1964-65 from the city to finance wage negotiation settlements made by the Board of Education since the Mayor's spring budget decision.

The conference participants also gave considerable attention to the UFT and their demands, including both "working conditions" and "salary." It was agreed that the Board of Education had been in a poor position with respect to the UFT negotiations in past years and that several steps would be taken to remedy matters during the negotiations for the 1965-66 school year. Specifically, the participants decided to make their own demands upon the UFT so that they would be in a better bargaining position, and to demand a different timing for contract termination so that union negotiations could precede the budget process instead of following it.

The group at that August meeting further considered the school budget process itself. The Superintendent and his Deputy for Business Affairs were particularly anxious to engage in the budget process as many persons at the local board of education level as possible, but they were also concerned that if people participated apparently without having any effect on final decisions, they would be frustrated and any potential public relations advantages would be negated. Thus, they were anxious to encourage local boards of education to have public hearings and to make representations to the Board of Education and its administrative staff regarding the budget.[3] They did not propose to delegate any actual responsibility for the budget, or any authority to set the budget, to the local school boards.

Each summer and early fall a lengthy and highly detailed intra-staff budget process is carried on, during which persons with the rank of supervisor, assistant superintendent, and associate superintendent prepare budget requests at their levels.[4] The district superintendents submit their budgets to the local boards of education, who hold public hearings on them. These hearings relate to maintenance and supply items and to integration, but also to the type and level of professional services to be offered in the districts. Following these hearings and any subsequent revisions by local school boards in their own districts, budgets are submitted to the Superintendent's office, where they are coordinated by an officer known as the Local School Board Coordinator.

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[3] The New York schools have recently been reorganized administratively. Increased responsibility and authority have been assigned to the district superintendents, and the size and importance of "headquarters staff" has been reduced.

[4] The total number of assistant, associate, and deputy superintendents in New York City in 1964 was approximately 45.

Some sections of the budget are prepared initially by persons who do not report to a district superintendent but who are responsible ultimately to associate or deputy superintendents at the central Board of Education office (usually bureau chiefs, e.g., the Director of the Bureau of Child Welfare). These budgets are examined at each step as they rise through the administrative hierarchy. Several sets of hearings are held at which staff members defend their budget requests before a higher administrator. Finally, the process culminates within the staff with a series of budget hearings conducted by each deputy superintendent for the budget items within his area of administrative responsibility. About 60 of these hearings at the deputy superintendent level are held and are considered top priority business during September and October.

In the last half of October, all budget requests are centralized in the office of the Administrator of Business Affairs, who reviews them under the supervision of the Deputy Superintendent for Business Administration. During this time, budget requests that have stood the test of the various hearings held by administrative officers and by local boards of education are organized into a single document for presentation to the Superintendent of Schools.

In the light of the results of the budget processes described above, the Superintendent of Schools and his immediate deputies consider again during November the priorities that were set earlier. In early December the Superintendent of Schools recommends his budget to the Board of Education. Prior to 1965 the Superintendent of Schools consulted little, if at all, with members of the Board of Education prior to submitting his budget. Of course, many items of Board business considered during the previous months had direct budgetary implications, but the budgetary priorities were not explicitly discussed with the Board of Education prior to the submission of the Superintendent's budget to the Board in December 1964.

In previous years (since 1961) neither the Board nor its committees had considered the budget in any detail prior to public hearings. When the Board received the Superintendent's budget in December 1964, however, the usual practice was altered to permit an informal business committee of three Board members to analyze the budget and prepare a report.

The informal business committee submitted a statement to the Board (but "leaked" to the New York Times the day before) criticizing certain features of the Superintendent's budget, particularly its recommended increase in the use of teachers assigned to administrative duties at Board of Education headquarters. It called for both increases and decreases in various categories of expenditure. Further, it suggested that the Board consider and adopt formally a list of priorities in the form of policy statements that would be used in determining which new programs would be included in the budget. Had this committee's recommendations been followed exactly, only a slight reduction in the Superintendent's total budget would have been realized. The Board subsequently adopted a statement regarding the budget, setting out the priorities which the Board wished to implement through its budget requests.

Public Hearings

Between the time that the Superintendent's budget was submitted to the Board and the time the Board adopted the budget, the Board held lengthy hearings at which many groups and individual citizens appeared. Over 150 groups appeared at public hearings in December 1964. These groups can be classified into three major types:

1. Important city-wide voluntary associations were usually represented by paid executive secretaries or executive directors, but sometimes by volunteer leaders. Such persons brought formal statements and received considerable attention from the Board and, the following day, from the local press. The Public Education Association (PEA) appeared to be the most influential of these groups. Its Coordinating Committee represents an attempt to unite a wide variety of organizations in their policies toward schools.

2. Employee associations and the United Federation of Teachers were represented by their paid staff members. These associations were usually most interested in what could be called staff benefits, but a very substantial portion of their testimony involved requests for increases in services or improvement in working conditions (e.g., reduced class size).

3. Local neighborhood voluntary associations, parent associations, or local boards of education brought their particular plans and grievances to the Board budget hearing.

Many budget requests by local organizations were highly specific. For instance, a frequently heard type of complaint related to physical conditions within a particular school, with a representative of the parent association from that school bringing the complaint to the Board. Other requests were on a broader scale and had implications for the total amount of the budget, rather than only for this distribution of funds among school units.

Some of the New York City administrative staff question the value of public hearings on grounds that "nothing is changed" and that it is all really just an act put on for public consumption. Board members, however, indicated that they listen carefully to statements prepared for the public hearing, particularly those from representatives of important city-wide voluntary associations. Frequently, the Board made sympathetic comments on requests for services made by those appearing at the budget hearings. Because the total of all requests exceeded (by several hundred millions of dollars) what the Board of Education could hope to receive in even its most optimistic estimates, it was necessary to choose among the requests. Board members indicated that the establishment of priorities among requests was where disagreement occurred between the Board and community associations, since every association felt its particular request should be granted top priority.

It is probable that the requests for specific services to individual schools at public hearings do have a minor effect on the distribution of funds. A collection of requests around a single theme will call the Board of Education's attention to problems and perhaps result in an allocation of funds to meet a problem. Nevertheless, the net effect of these requests upon a budget the size of the New York City budget is probably negligible.

City-Wide Voluntary Associations and the Budget

If efforts of local neighborhood groups have no major influence on the overall shape of educational expenditures, New York's uniquely influential, city-wide voluntary associations are significant, indeed. The three most important organizations are the Public Education Association (PEA), the United Parents Association (UPA), and the Citizens Committee for Children (CCC); a fourth organization, the United Federation of Teachers (UFT), has a comparable influence on educational expenditures in New York City. It is noteworthy that all these organizations regularly support higher school expenditures. Each employs a paid staff of up to 25 full-time persons, and exerts substantial political influence at both the city and the state level. Of course, the UFT is a different sort of organization, and its influence is felt through collective bargaining over wages and working conditions, rather than by direct appeals.

These organizations influence the school budget in New York City in a number of ways. First, staff members appear regularly at all public hearings related to the budget, including the Board of Education hearings, the Board of Estimate hearings, and the City Council hearings. In addition, they appear before education committees of the state legislature to testify on many school bills. The PEA, UPA, and CCC enjoy direct personal communications between their officers and executive directors on the one hand, and the Mayor, the Commissioner of Education, and the Governor on the other. At times in the past, notably during the 1961 scandal,[5] representatives of these three associations attended meetings called by the Mayor or the State Commissioner of Education at which no official representative of the New York City Board of Education or administrative staff was present.

Additional ways in which these organizations influence school expenditures, and other educational policies as well, is through the cultivation of close relationships with key members of the administrative staff of the schools, and through close contact with members of the Board of Education.

Examples of the direct influence these organizations have on the budget are numerous. The UFT's wage negotiations are perhaps the best example, but the UFT also was instrumental in initiating the More Effective

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[5] In 1961 charges were made of misconduct on the part of a few school officials and employees; the Board was removed, and the Legislature established a new selection procedure for Board membership. Under the new plan, heads of 12 organizations, such as the PEA, serve on a screening panel which nominates to the Mayor three names for each vacancy. The Mayor's appointment must be from this list.

Schools program in which compensatory educational services are provided at a saturation level to slum schools. The annual cost of the additional services in More Effective Schools is something like $500,000 per school, and the program is now extended to some 20 schools. The UPA, in the fall of 1964, called for the extension of compensatory educational services to schools in marginal neighborhoods before they become slum schools; the Superintendent immediately seized upon the suggestion and indicated to the executive director of the UPA that it would be included in the budget. A sum of $3 million was included in the Superintendent's budget for this item in December 1964.

Thus, voluntary associations influencing school expenditures use a wide variety of techniques and channels of communication. The political value of their support for the school budget should not be minimized. The present level of school expenditures per pupil in New York City can be traced, at least in part, to the vigorous support that these organizations have given publicly (and in practical political ways) to the school budget during the past ten years. A related condition, and one that has also had its effect upon school expenditures, is the relative impotency of those organizations that seek to keep taxes low in New York City. The Citizens Budget Commission, the Citizens Union, and the United Taxpayers are oriented toward efficiency and economy in government. However, their efficacy with respect to school budgets with important political leaders such as the Mayor is not as great as that of the organizations cited above.

The United Federation of Teachers and the Budget

The UFT contract expires on June 30 of each year and serious negotiations do not begin until late spring, usually after the Mayor's budget is announced. By contract, the negotiations cannot begin prior to October 15.

Since the UFT's demands are complex (totaling several hundred pages annually) they cannot be negotiated in a short period of time following October 15. Since the Board of Education's revenues are not known until April or May, and since the perceived legitimacy of strike threats is greater as contract deadlines approach, the Board of Education has little or no information during December about the price of its eventual contract settlement with the UFT.

To illustrate the magnitude of this problem for the Board, the UFT's demands for a recent year are summarized below:

APPENDIX TABLE 1

UFT DEMANDS IN NEW YORK CITY FOR THE 1965-66 FISCAL YEAR

(Cost, September 1965, for 10 months, as calculated
by the Board of Education)

A. Working Condition Demands		Cost
1. Reduction of class size	$143,300,980	
2. Reduction of teaching loads	68,566,045	
3. Special classes	8,351,515	
4. Special teachers	14,497,609	
5. Administrative relief	5,793,176	
6. More Effective Schools Program	7,128,400	
7. Supplies	1,656,752	
8. Miscellaneous	4,689,320	
9. Derived costs (pensions, Social Security, etc.) on above items	45,290,147	
TOTAL		$298,976,944
B. Salary Demands		283,444,475
GRAND TOTAL		$582,421,419

This total amounts to almost $600 per pupil in additional expenditures annually.

Since the Board of Education budget must be prepared and submitted to the Mayor prior to any realistic indication of the price of the UFT settlement, the Board has two alternatives. It can ignore the obvious fact that it will incur costs as a result of the settlement, and plan to appeal to the Mayor for supplementary appropriations at the time the wage contract is settled. This alternative is unpalatable, because when followed in previous years it has resulted in the UFT's moving directly to the Mayor and even to the Governor for direct negotiations, thus publicly by-passing the Board of Education. Its second alternative, and one more comfortable in terms of the Board's desire to be an independent policy-making group, is to estimate what the minimal costs of the settlement will be and to include such an estimate in the budget in December. This was the procedure followed in December 1964, when the Superintendent recommended a $20 million item be included in the Board's budget to cover UFT demands. This item was approved by the Board, was later approved by the Mayor, and was included in the approved budget. This procedure has the effect of notifying the UFT as to the amount the Board has available to meet its demands, operationally becoming a floor below which the UFT will not settle. The UFT expected to receive a far more generous settlement than the $20 million estimated by the Superintendent, and intended to rely upon its ability to embarrass the Mayor and the Governor politically to obtain the additional revenues necessary to meet their final and minimal demands.

The union eventually received a settlement of $65 million through mediation from the Mayor. This $65 million is very close to the amount the union actually expected the Mayor to recommend. Of course, the Mayor then had to find the $45 million the Board needed (in excess of its original $20 million figure) to finance the new terms, but apparently the union was aware during the negotiations that approximately $45 million was available if needed.

Weighing all these factors, the Board of Education must adopt a budget within a few days during the latter part of December. By December 31 a line-item budget must be submitted to the Budget Director of the Mayor.

THE MAYOR'S DECISION

At this point, the Board of Education's budget requests go "underground" for three and a half months. Between January 1 and April 15, the Mayor and his staff evaluate the budget proposals of all city departments, estimate revenues from local, state, and federal sources, and reach their decisions about the compromises that must be made between the need to increase revenues and the need to reduce budgets.

The Mayor's Budget Director and his staff review the school budget on a line-item basis. The City Budget Director can call upon the services of two budget analysts who spend virtually the entire year in the Board of Education office examining Board of Education budgets and expenditures. These two members are on the school payroll, although actually on the City Budget Director's staff; they report their findings regarding school expenditures to the City Budget Director between January 1 and April 15. In particular, their analyses involve the application of ratios and formulas to budget categories. These formulas are used with respect to personnel, supplies, maintenance, equipment, etc. The exact ratios and formulas are not known to the Deputy Superintendent for Business Administration or to the Administrator for Business Affairs. Nevertheless, as the City Budget takes shape, the City Budget Director can utilize the detailed knowledge of his two representatives working in the Board office.

To place the limits of the Mayor's budgetary discretion in perspective, the Board of Education faced about $43 million in mandated increases for the 1965-66 budget. These it could not reduce. In addition, it had estimated conservatively the $20 million figure for UFT demands. Of the $137 million requested increase in the Board's budget, about $63 million was therefore committed. In addition to these items, the Board of Education formally adopted a policy statement called "Excellence for the Schools of New York" together with a plan to implement that statement of policy. These plans, related to efforts to achieve racial and ethnic balance through a reorganization of the school system into a 4-4-4 pattern, required $28 million during the 1965-66 budget year. Thus, $91 million of the requested $137 million was already committed.

First, then, the Mayor faced $43 million which he virtually could not avoid. Second, he faced $20 million for the UFT which, as a Mayor indebted to labor for political help, he could not avoid. Third, he had to fund most or all of the $28 million for integration or, in effect, face charges of interfering with the Board of Education's policy-making jurisdiction about its most critical problem area.

Between January 1 and April 15 members of the Board of Education, the Superintendent, one or two members of his top staff, and leading voluntary association representatives will attempt to persuade the Mayor and his Budget Director of the legitimacy of the schools' claims for additional revenues, over and above what everyone at least implicitly realizes to be required increases.

In the New York City budget process, however, the final decision rests with the Mayor, for he is the one responsible for proposing the taxes needed to produce the revenues necessary to fund the city's budget. Since the Mayor could not raise the property tax, then at its constitutional limit, without an amendment to the state constitution, he had to obtain additional revenues by increasing other city taxes, by obtaining additional state aid, by obtaining additional federal aid, or by borrowing. The state budget is set by the Legislature prior to the time the Mayor must announce his April 15 budget. Thus, the Mayor is aware of the amount of state aid which the city and its schools will receive. If the Mayor's knowledge of state aid and estimate of federal aid does not close his revenue-expenditures gap, he may, as an alternative to the levying of additional taxes, obtain authority from the Legislature to borrow in anticipation of future property taxes by issuing property tax warrants. In recent years, under the pressure of rapidly increasing expenditures and restricted revenue sources, Mayor Wagner turned to tax anticipation warrants on several occasions.

The Legislature was stalemated over the issue of the selection of the Assembly's speaker for the first two months of its 1965 session, and was consequently delayed in determining the state budget. The Mayor was unwilling to announce his budget for New York City before he knew the amount of state aid the city would receive. Governor Rockefeller and Mayor Wagner evidently arrived at an understanding under which the Republicans in the Assembly would support Democratic Mayor Wagner's candidate for Speaker of the Assembly. The Mayor, in turn, evidently agreed to support a number of the Governor's legislative proposals, including some demands for new taxes at the state level, particularly a state sales tax. After it organized, the Legislature passed the Governor's budget rather quickly, but the Mayor was forced twice to obtain two-week delays from the Legislature in the deadline for submitting his budget to the City Council and the Board of Estimate. Thus, it was May 13, rather than April 15, when the Mayor proposed his budget to the City Council.

In this budget, the Mayor estimated an increase in state aid for the schools of some $58.5 million and an increase in local property tax revenues for schools of some $17.3 million. This $76 million increase, excluding federal aid under the Elementary and Secondary Education Act of 1965, is all the added revenue the Board of Education will receive to meet the kinds of commitments described below.

The Mayor's budget is discussed by the City Council and the Board of Estimate. Each of these groups holds separate, simultaneous public hearings on the city budgets during a three-day period, and may modify the budgets either by raising them or by lowering them. The city budget is then returned to the Mayor, usually in late May. The Mayor has approximately two weeks to decide whether to approve or disapprove any changes in his budget made by the Board of Estimate and the Council. If he vetoes the changes, a two-thirds vote of both the Board of Estimate and the City Council is required to override the Mayor's veto. The effect of the Mayor's veto is to return the budget to its previous condition, that is, to its condition at the time the Mayor proposed it to the Board of Estimate and the City Council.

In conclusion, a word must be said about line-item budgets and lump sum appropriations. The Mayor's Budget Director analyzes the budget on a line-item basis. The Mayor's office informs the Board of Education staff informally about changes in the Board's budget requests. These changes are indicated on a line-item basis. However, the Mayor includes in his budget message to the City Council only a lump sum appropriation for what he refers to as the "Education Department."

The Deputy Superintendent of Business Administration states that in theory the Board of Education's budget from the Mayor is a lump sum appropriation but, in fact, the lump sum is equal to the sum of the line items which the Mayor decides are appropriate. The Board of Education nonetheless has power to transfer funds among budget categories, provided only that it holds public hearings prior to such transfers.

In addition, the Board and the Superintendent of Schools discuss with the Mayor the public relations and political consequences of certain strategic decisions, such as UFT negotiations and integration decisions. The Mayor, however, has been scrupulous, since a Memorandum of Understanding[6] in 1963 not to disagree publicly with any Board of Education statement on a policy matter. Nevertheless, informal communication does exist, and there are staff members both from the office of the Mayor and from the office of the Board of Education who are exclusively assigned to perform liaison functions between the two organizations.

Still another word is in order about two technical matters related to total expenditures. First, each Board of Education budget category for personnel contains what is called an Accrual Account. This is an estimate within the budget of personnel turnover, item by item, and thus removes from the school budget one of the major sources of budget "padding," that occurs as staff members are employed later than expected, at salaries lower than expected, or resign or die prior to the end of the budget year. One of the major functions of the City Budget Director's men who work in the Board of Education office is to refine estimates of these accruals. Second, the Board of Education frequently finds in mid-year that its expenditures are exceeding its revenues, due to mid-year wage negotiations or, in recent years, to "crash" programs in integration. In a few cases, supplemental appropriations can be obtained from the Mayor; more typically, however, the adjustments must be made by reducing expenditures, usually in maintenance and the purchase of supplies, and in second-semester staffing.

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[6] A Memorandum of Understanding between the Mayor and the President of the Board of Education.

APPENDIX C

THE BUDGET PROCESS OF THE LOS ANGELES CITY SCHOOLS[1]

The Los Angeles City Schools constitute the second largest local system of public education in the United States.[2] The Los Angeles Unified School District covers an area of 710 square miles and employs some 41,000 persons to service an enrollment of 710,000 students (enrollment has increased approximately 20,000 students per year for the last five years). Total current expense of education is budgeted for 1965-66 at $338 million; equivalent to $529 per unit of ADA.

The Los Angeles school system is not only large, but also complex. Its revenues, drawn from many sources, are spent on literally hundreds of budget line items. In addition to teachers and administrators, the District employs a wide variety of personnel, including steeplejacks, physicians, costume-makers, and tree surgeons.

The size and complexity of the Los Angeles City Schools is demonstrated annually in the published Detail Budget. This document, which currently exceeds 300 pages, is the end product of the budget process that requires more than half a year of meetings and detailed planning. What follows is an attempt to describe the main activities of that process, and to highlight the points at which significant decisions are made.

GENERAL INFORMATION

Three school districts served the general area of Los Angeles City until 1960; in that year, the elementary and secondary districts were consolidated into the present arrangement of a unified (K-12) district. The junior college (Grades 13-14) district continued as a separate entity. These districts have for many years shared a common governing board and administration. The governing board has seven members, who are elected from the school district at large and serve staggered four-year terms.

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[1] This Appendix was written by staff member James W. Guthrie.

[2] Junior colleges are operated by a constituent district.

Board members are paid $75 per Board meeting, but payment may not exceed $750 per calendar month. The Board holds general meetings on at least two days each week, and the work of the Board's ten standing committees usually necessitates additional meetings. Board members are provided with offices, clerical assistance, and transportation. In addition, the Board is responsible for the hiring of a general superintendent who acts as the chief administrative officer for the system.

Local revenues (approximately 69 percent of the District's total income in 1960) are derived primarily from taxes levied on real properties. The assessment of properties (with the exception of state-assessed properties of public utilities) is made by an elected assessor, a county officer who operates independently of the Board of Education.[3] No formal lines of communication exist between the assessor's office and the school system.

The power to levy taxes on property granted to the Board by the state Legislature is strictly limited. The limits are set by the Legislature in terms of maximum tax rates that can be authorized by the Board and are so restrictive that the Board would be unable to operate the schools were it not for a legal provision allowing local voters to increase the limits. The Los Angeles City Districts voted in 1952 and again in 1957 to raise the limits on the general purpose tax rate to its present level of $2.65 (plus $.35 for the junior college district) per $100 of assessed valuation. The District's general purpose tax rate has been at or close to this maximum for the past five years.

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[3] The assessment ratios vary in different categories of property (residential, commercial, industrial, etc.), but it is estimated that for 1965 the overall assessment ratio was approximately 24 percent of true market value. The total assessed valuation for the Los Angeles Unified School District was estimated by the school system Budget Division to be $7 billion in 1965.

In addition to the general purpose tax, the Legislature has authorized a number of special purpose taxes that school boards can levy without obtaining voter approval. In 1965 Los Angeles levied, in addition to its general purpose tax, 11 special taxes (at rates ranging from $.003 to $.59 per $100 of valuation) for such purposes as mental retardation programs, community services, and retirement plans. Since revenues by such taxes must be spent for the purpose specified, they proved little help toward easing the pinch when the general purpose tax fund limits became restrictive.

Within limits set by the Legislature, or as modified by vote of the people, the Board of Education decides the total school tax rate. Once approved by the Board of Education, the budget is further approved as to form by the County Superintendent of Schools and is subsequently submitted through his office to the County Board of Supervisors. The latter group carries out the legal duty of approving the tax levy. These last steps are pro forma in nature; if the Los Angeles Board of Education budget meets all legal requirements, the approval of the County Superintendent and the authorization for levying taxes by the County Board of Supervisors are virtually automatic.

Approximately one out of every six public school students in California is in the Los Angeles system. Consequently, Los Angeles' share of the state education budget is a large one (some $107 million in 1965). These state monies constitute 30 percent of Los Angeles' revenues. Additional school revenues are obtained from a variety of sources. Federal funds, which up until a year ago typically accounted for less than 1 percent of the District's income, now make up approximately 5 percent. Also, income is realized from tuition payments, county monies, and the like.

The school district administrative organization is headed by a general superintendent who is assisted by two deputy superintendents, one for instruction and one for business and educational services. Subordinate to them are ten administrators (associate and assistant superintendents), each in charge of a division. The Unified District is divided into eight elementary and four secondary areas, each under the supervision of an assistant superintendent. These assistant superintendents report to associate superintendents who head the Elementary Division and Secondary Division.

THE BUDGET PROCESS

Budget Preparation

The major responsibility for the preparation of the Los Angeles City Schools' budget lies with the Budget Division, under the direction of an assistant superintendent. This division, devoted almost entirely to financial planning, is somewhat unusual by comparison to other United States school systems in the degree to which it is differentiated from the division for business services. It has as its functions the estimation, projection, and analysis of revenues, the preparation and initial screening of budget requests, and research on a wide range of fiscal matters.

The budget cycle typically begins in the middle or the latter half of December (e.g., December 18, 1964, for the 1965-66 school year), with the Budget Division's distribution of budget request forms (for personnel, supplies, and equipment) to the various divisions of the school system.

In accordance with the procedures adopted by the Los Angeles School Board in 1955, the Superintendent's "Preliminary Budget" is submitted to the Board in two parts. Part "A" lists those items necessary to support the current educational program, with allowances made for pupil growth and salary increments. Part "A" contains no funds for changes in services, materials, or supplies except those controlled by norms or otherwise authorized by the Board's action. Part "B" lists those recommendations for change in the current educational program by districts, by divisions, and by appropriations, together with estimated costs. The "A" and "B" system allows the Board to concentrate its analytical efforts on proposed changes in the educational program and to evaluate those changes in terms of costs. Well over 90 percent of the District's budgeted expenditures are in the "A" budget. Each division receives a copy of the District's budget policies and guidelines along with the budget request forms. The budget request forms are set up in accordance with the "A" and "B" budget distinctions.

Many of a division's budget requests are decided by predetermined formulas called norm tables.[4] These norms are in the form of ratios that apply to such items as number of students per teacher, number of clerical employees assigned each school, and number of square yards that can be swept by a custodian. Norms are a matter of Board policy, but are subject to reevaluation. A division head can request that a norm be reconsidered in the light of new evidence. For example, technological breakthroughs associated with maintenance have periodically brought about changes in particular norms. The Superintendent's recommendation regarding the changing of a norm carries a heavy weight in the Board's decision.

Principals participate in the budget making for their schools, but they do not have much decision-making power. The number of staff positions and the supplies for a building are largely determined by enrollment figures and the above-mentioned norm tables. However, principals appear to exert added influence on the budget process by operating through more informal channels. Many principals and officers of the various district-wide principals' associations visit informally with the heads of their particular divisions (either elementary or secondary) about funds for programs that they are especially anxious to initiate or maintain. To whatever degree the division head is convinced by the principals, he places their demands in his division's budget requests.

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[4] See the discussion of formulas in Chapter III.

Each division head determines the budget requests for his particular division. This marks the first significant decision-making point in the budget process. If a division head decides that a subordinate's budget request does not warrant inclusion in his division's budget, for most purposes the matter is ended. A subordinate is in the position of either convincing his division head of the merit of an idea or thereafter reconciling himself to doing without the item.

Division heads reportedly do not inflate their budget requests for purposes of negotiation with the Superintendent. They realize that they will be evaluated upon their ability to defend logically each of their requests to the Superintendent, and perhaps Board members as well. Consequently, in the opinion of division heads, individuals within the Budget Division, and the Superintendent, the budget requests reaching the Superintendent are educationally sound and defensible in light of the District's needs.

Budget requests are due in the Budget Division office by the end of January. The next four to six weeks are spent in collating requests and checking to see that the prescribed norms and growth increments were accurately determined. Sometime after the middle of March, the compiled requests are presented to the Superintendent in what is termed "The Statement of Requests." This document is published by the Budget Division and is available to the public.

The compilation of the division level requests marks the end of budget preparation and the beginning of budget determination.

Budget Determination

Once having received the "Statement of Requests," the Superintendent begins to formulate the "Preliminary Budget" (followed later by a "Tentative Budget," a "Publication Budget," and a "Final Budget"). The Superintendent holds a week-long series of meetings with division heads to consider their respective budget requests. These budget hearings are attended only by the Superintendent and Deputy Superintendent, the division head concerned and perhaps one or two of his staff, and one or two Budget Division personnel.[5] Hearings are given over to a line-by-line scrutiny of division requests, with heavy emphasis on "B" items. The Superintendent may call upon a division head to defend a particular line-item request or to explain it in more detail. Subsequently, depending upon his judgment of the item, the Superintendent may alter the amount of the request, assign the request to the "B" portion of the budget, or place the request in a budget "Addendum" (part "C"), which contains all division head requests not allowed in the "A" or "B" portions of the budget.

The Superintendent's budget hearings mark the second major decision-making point in the budget process. At this time the Superintendent decides which budget requests will carry his recommendation. Also, it appears that the Superintendent uses the budget hearings to make a number of assessments regarding the value of various educational programs and the capabilities of selected individual employees. It should be emphasized that the present Superintendent was formerly an associate superintendent in charge of the Budget Division and is intimately familiar with the budget process. Consequently, he is sophisticated as to the evaluation and planning potential inherent in fiscal management processes and uses them to advantage.

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[5] This procedure has been revised as of 1966. Division heads now meet as a group in an attempt to rank order the "B" budget requests prior to presenting them as a group to the Superintendent.

Board policy requires that the Preliminary Budget be drawn up in accordance with existing policy and known law. In effect this means that the Preliminary Budget must be within known revenues. Consequently, a great deal of attention is given by the Budget Division to estimating the probable income. The estimation of forthcoming state flat grant and equalization monies is very accurate because no increases in state aid (other than those warranted by increases in ADA) are anticipated. However, it is difficult to predict local income because data concerning assessment practices and assessed valuation are not available from the assessor's office until July. Nevertheless, the Budget Division's own projections of assessed valuation have been remarkably accurate in past years, despite rapid growth in the total assessed valuation (up one billion dollars in the last five years).

In order for a district to raise its maximum general purpose tax rate, we noted earlier that the proposed increase must be approved by the district voters. School districts in California do not typically go to the public each year for approval of the tax rate. Rather, the usual procedure is to hold an election to authorize the board to levy up to a maximum general purpose tax rate sufficiently high to cover estimated needs for several years. The present Los Angeles maximum general purpose tax rate ($2.65 for the Unified District) was authorized by an election in 1957. Since that time two elections on proposals to increase the maximum have been held but neither resulted in the necessary simple majority for approval. The 1959 proposal was affirmed by only 31 percent of those voting, and the 1962 proposal by only 40 percent.

The statutory mode prescribed for calling an election to increase the maximum ratio requires some 60 to 90 days for a district such as Los Angeles to "gear up" for an election. In addition, the administrative style of the current Superintendent is such that he would take the time necessary to carefully lay the groundwork for such an election. He would make sure that the political climate was favorable and would go to great lengths to demonstrate with hard data the fiscal needs of the schools. Thus, because of the timing and election complexities involved, school personnel are aware early in the budget cycle that no election is in the offing and, therefore, the revenue limits on the budget submitted by the Superintendent to the Board of Education are known. However, no division head knows his division's share of the available revenue. Consequently, division heads compete among themselves for appropriations, and this competition causes each to defend stoutly his particular budget requests before the Superintendent.

Following the Superintendent's budget hearings, a month is taken by the Budget Division to prepare the Superintendent's "Preliminary Budget." The Superintendent typically accompanies the presentation of his budget to the Board with some carefully prepared remarks directed to the press and public as well as to the Board of Education. The Superintendent's budget message establishes a tone within which subsequent Board budget hearings are conducted. In his message accompanying the 1965 budget, the Superintendent emphasized that the budget was curtailed, and the District thereby hampered in its attempt to achieve a better educational program, by the failure of the state Legislature and the Governor to provide adequate funds for education. Since the Legislature controls both the amount of state funds and the limits on tax rates, the only action available locally is for voters to increase the tax rate limit, which has been at the maximum for eight years.

The Superintendent's budget message, plus selected facts from the "Preliminary Budget," are made available to the press in a release prepared by the School District's public information office. This press release comes relatively early in the budget process and allows for adjustments in later budgets should there be a negative feedback from the community. In addition to relying on the press for communication, the Superintendent meets a heavy schedule of speaking engagements that informs the public and keeps him in touch with public opinion on the matter of taxes and revenues.

In addition to receiving the "Preliminary Budget," Board members also are presented with a weighty (ten to twelve pound) packet of information in support of the budget. Contained in this Board member "budget packet" are 30 to 40 memoranda relating to previous years' budgets, tax rates, enrollments, salary schedules, and the like.[6]

Approximately one week following the receipt of the Superintendent's "Preliminary Budget," the Board's Standing Committee on Budget and Finance, composed of three members, initiates its hearings. While they are studying the budget, some or all of the remaining four Board members often join them. This Committee holds five or six day-long public meetings to discuss the budget and to prepare recommendations for the Board to consider. The Committee focuses almost all of its attention on a line-by-line review of "B" items for each of the divisions. Also, those budget requests not recommended by the Superintendent (in the "Preliminary Budget's" addendum) may be discussed. The head of each division, as well as the Superintendent, meets with the Budget and Finance Committee and defends his division's requests. Some of the addendum items are reinstated by the Committee in the "B" budget; when such changes are made, items of a matching dollar amount are generally subtracted from the "B" budget so as to maintain the overall balance between budgeted expenditures and estimated revenues.

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[6] Los Angeles School Board members are presented with more budget-related information than board members in any of the other 14 cities examined in this study. Moreover, interviews with Board members revealed that they rely heavily on this information for making decisions. Board members become quite expert in understanding budget making and budget decisions. They become so accustomed to budget support data that on occasions when an item has been deleted from their "budget packet" they have noticed its absence and asked that it be reinstated.

In mid-May, following the Budget and Finance Committee's meetings with division heads, a day is given over to two special Board meetings; one is in the afternoon, at which persons not employed by the School District make presentations regarding the budget; the other is in the evening, at which employee groups make presentations. The afternoon meeting is attended by representatives of a variety of community-wide organizations (such as the PTA, the NAACP, the League of Women Voters, and taxpayers associations). Individuals who desire to make a presentation generally arrange to be placed on the agenda.

The Board's meeting room, which holds 189 people, is typically half full at the afternoon session. Presentations fall into two categories: by those desiring an increase in educational services (such as organizations concerned with handicapped or gifted children, the NAACP, and adult education groups) and by those desiring to minimize the tax rate (such as the

California Taxpayers Association or the Los Angeles Property Owners Association). A subcategory of those desiring the extension of educational services is composed of groups that support the schools' programs but who do not demand increases in the level of services (the PTA, the League of Women Voters, and the like).

It is difficult to ascertain the degree of influence such public presentations have upon the overall budget. Board members appear to be attentive; they treat all the individuals making presentations with courtesy. Even the gentleman who argues that property taxation in support of public education is unconstitutional is annually accorded a hearing. Board members may on occasion be significantly influenced by such presentations as those made by the NAACP, for example, and this influence may be reflected in budget allocations. Generally, however, we conclude that the influence of such groups is exerted less at budget hearings, and more probably, through informal contacts with the Superintendent and the Board throughout the year.

The evening meeting is attended by a different audience and has a different tone from that of the afternoon. The large room is filled beyond capacity with officers, representatives, and members of employee organizations (both certificated and non-certificated). Officers of the various employee groups believe that a show of numbers impresses the Board with the validity of employee demands, and consequently a well-planned campaign to fill the board room is carried on for several weeks prior to the actual meeting.

The professional employees of the Los Angeles schools belong to some 46 local educational organizations (some professional employees hold membership in several organizations). However, only five or six of these groups typically make presentations to the Board. The Los Angeles Teachers Association (a National Education Association affiliate) is the largest of the District's employee groups. Other influential groups are the Los Angeles Local of the American Federation of Teachers (membership figures not available), the Affiliated Teacher Organizations (which, in addition to teachers, contains school nurses, child-care-center personnel, and the like), and the three organizations (one a union) representing the non-professional employees.[7] The presentations made by the teacher associations are of a sophisticated nature; they employ state and national salary consultants and utilize many kinds of illustrated displays. The American Federation of Teachers' presentation differs in that typically its demands are greater in dollar value and its tone is more aggressive.

Presentations of the non-professional groups involve fewer technical details and generally emphasize the need for financial reward for their faithful service. The Los Angeles City School District operates under the Merit System provisions of the Education Code for the State of California. One of the requirements of the section is that the Personnel Commission, which is responsible for classified personnel matters, makes recommendations to the Board of Education concerning salaries and salary adjustments. The Commission, in making its recommendations, must consider prevailing wages for comparable work in private industry in the community. To implement these requirements, the Board of Education and Personnel Commission annually survey the salary rates of major private industries in the community and make corresponding adjustments in the salaries of school district classified employees.

Employee groups seek extension of benefits, particularly higher salaries. They also are concerned with the schedule for distributing salary monies; the teacher groups are not always in accord with regard to the size of the increments, the number of steps to the schedule, the starting salary, and so on. For example, the junior college teachers argue that on the basis of their training they should receive more money. High school teachers counter this proposal by referring to the lighter teaching load and smaller classes of junior college teachers. Young teachers want more cash, older teachers are more concerned with fringe benefits. Thus, in addition to passing judgment on the total amount of money allocated to staff benefits, the Board and the Superintendent must arrive at a distribution plan as satisfactory as possible to all employee groups.

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[7] The Board does not have a collective bargaining arrangement with teacher groups, but a "Professional Negotiating Council" representing all teacher groups in proportion to their membership was recently established.

However, teachers probably influence the budget process less at Board hearings than by the previous participation of their representatives at a series of informal meetings with the Superintendent. Early in the budget process (usually after the Superintendent has met with his division heads and gone over their "A" and "B" budget requests), the Superintendent meets with teacher organization officers who ask to speak with him about the budget. At these meetings the Superintendent explains the revenue estimates and listens attentively to the demands of teacher groups. It appears, however, that even prior to these meetings the Superintendent has decided in rough figures what amount will be set aside for increasing staff benefits. It is of interest to note that in the 1965-66 budget process teachers accepted a wage package equal to the amount of money set aside by the Superintendent early in the budget process. One teacher organization official stated that few persons understood the budget as well as the Superintendent, and thus it was difficult to argue with him as to how much money actually was available for increases in teacher benefits. Implied in this position is that total budget demands should stay within the boundaries of estimated revenues.

A representative of a taxpayers' organization reported that he also met informally during the budget process with Board members, the Superintendent, and members of the Budget Division. He termed himself a "watch dog" and expressed concern that funds be used efficiently.

In addition to meeting with the Superintendent and making presentations at Board meetings, there is some evidence that the teacher organizations attempt to influence budget allocations indirectly by action outside formal channels. The officers and representatives of several of the teacher associations explained that they communicate frequently with some of the Board members apart from Board meetings and attempt to make the teachers' demands felt in this way. Also, interviews with teacher representatives reveal that several Board members have accepted teachers' support (in the form of funds and precinct workers) in their election campaigns, and thus are to some degree bound to be more attentive to the needs of employee groups.

Following its two public budget hearings, the Budget and Finance Committee makes a formal budget recommendation to the Board of Education. Since most Board members previously sat on the augmented Budget and Finance Committee during its budget deliberations, there are few changes made in the Committee's recommendations. The Board's recommendations regarding the "Preliminary Budget" are placed on state forms, approved by the Board, and filed as the "Tentative Budget" by July 1 with the County Superintendent of Schools. The "Tentative Budget" will remain substantially intact and subsequently will become the "Publication Budget" and "Final Budget." The changes that take place in the subsequent budgets are generally the result of increases in income unanticipated at the time of the "Tentative Budget's" adoption. The additional revenues, if not specifically earmarked, are used either to extend staff benefits or to reduce taxes.

The remaining steps in the budget process are mostly pro forma and have little bearing on the amount to be spent. The County Superintendent checks the "Tentative Budget" to be sure that it complies with the California Education Code. If the document contains no legal errors, it is returned to the Board of Education for approval or revision. The "Publication Budget" is assembled on state forms and submitted to the County Superintendent not later than July 20. Subsequently, the Board of Education adopts a "Final Budget" that is then used by the County Superintendent to determine the tax rate required to meet the budgeted expenditures. The County Board of Supervisors subsequently orders the levying of the necessary taxes on or before September 1. The Budget Division then begins the task of assembling the forms and data for the preparation of the next year's budget.

CONCLUSIONS

The strategic decision-making positions in the budget process are division heads, the Superintendent, and members of the Board of Education.

The budget is influenced by a number of individuals and groups located both within and without the school system. The administrator groups appear to have the first opportunity to influence the allocation process by virtue of their ready access to division heads. Also, representatives of teacher associations have an early opportunity to influence the budget by meeting with the Superintendent. Furthermore, teachers influence the budget by communicating informally with members of the Board.

Community groups exert varying degrees of influence, depending upon the extent to which Board members are sympathetic to the causes involved. For example, the current civil rights activities have made boards of education across the United States sensitive to the needs and demands of Negroes;

Los Angeles is no exception. There is no evidence that tax-minimizing groups exert a large degree of influence, but it is possible that tax groups affect the budget by interceding at the level of the assessor and attempting to influence assessment ratios and practices.

The single most important individual in determining the Los Angeles budget is the Superintendent of Schools. It is his prerogative to recommend to the Board that an election be called to authorize a higher maximum tax rate. Should he recommend such an election, it is probable that the Board of Education would support it. For the past five years the Superintendent has chosen not to do so. His decision is based primarily on the prevailing financial needs of the District and what he feels is the willingness of the public to support a higher tax rate, but other considerations enter in. For example, the Superintendent explained that he would hesitate to recommend a tax election in a year when the District is attempting to pass a capital improvement bond issue. Nor does he think it wise to hold a tax election in a national election year when the voter turnout is likely to be heavy, because of a belief that heavy voter turnout is often associated with defeat of the proposal.

In addition to being the key individual in deciding the amount of money the schools spend, the Superintendent is also the single most important person in deciding how the available revenues will be distributed. His "B" budget recommendations to the Board are adopted with relatively few alterations, and it seems unlikely that the Board would initiate or delete a budget item over the Superintendent's strong objection.

Short of recommending an increase in the maximum general purpose tax, the Superintendent and Board have a slight amount of discretion in determining District income by deciding upon the number and amounts of special purpose taxes that the Legislature has authorized to be levied without voter approval.

The Superintendent's influence is the result of both his position and his personal capabilities. In his role he is expected to decide what budget requests will be recommended to the Board; his training and knowledge regarding fiscal matters are so extensive that his recommendations carry weight in the eyes of Board members.

The most important decision regarding the Los Angeles budget is whether or not to call an election for an increase in the maximum general purpose tax. This decision is made by the Superintendent and is not a part of the formal budget process. Once that decision is made in a particular year, the only remaining budget concern is with the distribution of available revenue, with the minor exception that the Superintendent may decide with the Board's approval to utilize certain special purpose taxes.

In the decisions regarding distribution of revenues, the division heads, the Board members, and the Superintendent are all significant actors; but here again, the Superintendent appears to play the major role.

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